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CALCULATIONS

RELATING TO THE

Equipment, Displacement, etc.

OF

SHIPS AND VESSELS OF WAR.

BY

JOHN EDYE.

LONDON:

RICHARD HODGSON,

9, GREAT MARYLEBONE STREET.

1832.

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1882, Nov. 14.
Gift of
Prof. B. H. Nash,
of Boston.

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14

TO

HIS MOST EXCELLENT MAJESTY,

King William the Fourth,

THIS WORK OF

NAVAL CALCULATIONS

IS, WITH GRACIOUS PERMISSION,

RESPECTFULLY DEDICATED BY

HIS MAJESTY'S

MOST DEVOTED SUBJECT AND SERVANT,

JOHN EDYE.

No vanity of authorship prompts me to present to the public this fruit of many years' study and close application ;— I send it forth, as I, at first, undertook it, at the suggestion of kind and discerning friends, many of them of high rank and consideration in the Naval Service. These friends, under the impression that I was fully equal to the task, from my professional training, and consequent acquirements and experience, were too urgent to be denied.

Stimulated thus, I commenced my work, and supported by ardent zeal for the good of the Service, I have completed it, with the hope of success which should ever attend and encourage enterprize. It is not for me to pronounce upon its merits; I will only venture to say what I have wished it to be, and what I humbly hope it may prove;—a work which

will give to the Sailor a thorough and scientific knowledge of the structure, powers, parts, qualities, uses, and contents (detail and aggregate) of his Ship, and of every element and material in and belonging to her; which will shew him, at a glance, what it would, otherwise, cost him much loss of valuable time and study to arrive at.

If the result should, happily, prove that I have, in any degree, merited the encouragement and good opinion with which I have been honoured by a large number of distinguished Naval Officers, and other professional gentlemen, my utmost ambition will be gratified.

JOHN EDYE.

LONDON,
1*st June*, 1832.

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ERRATA.

Page 84. Read Brown's Chain Cables, before Brunton's.

90. " A chaldron of coals:" read cubic feet 58.66, and not 57.25.

EXPLANATORY NOTES.

ON THE SCALE OF CAPACITY.

To ascertain the Weight or Immersion of a Ship, first take her draft of water forward and aft, and add the two results together for a mean:—

EXAMPLE:

	Feet.	In.	
The 120-Gun Ship draws, forward	15	10	
aft	18	2	
	34	0	
	17	0	the mean.

	Tons.	Cwt.
On the scale for that Ship, at 17 Feet, is a ticked line shewing her light-water-line, and her weight or displacement at that line, to be	2459	18
Add to this amount, the weight of her Ballast, Masts, and Gear, and of various Stores received on board, to immerse her three feet	763	14
Her displacement will, then, be seen to be . . .	3223	12

This is found by dropping a perpendicular from that quantity marked on the *Ton* Scale, to intersect the Curve line; from which intersection, a line drawn parallel with the light-water-line, to the *Feet* Scale, will shew the Ship's immersion, and that her draft of water, is twenty feet. In like manner, according to any weights put on board of, or removed from the body, the immersion of any class of Ship or Vessel, may be ascertained: See page 30, and the 120-Gun Ship's scale of capacity opposite to it.

ON THE MEASURING OF MASTS.

The present method of measuring the length of Masts, is by yards and inches, and not by feet, and by reckoning the length from the heel of the mast, to the top of the *short* head; but as all masts have, now, a *long* head, the length of which is regulated by allowing one inch for every yard a mast is long, the true length of a mast, with its *long* head, may be found in the following manner:—

EXAMPLE:

	Yards.	In.	
The 120-Gun Ship's main-mast is	39	32	
The *long* head is, consequently, about	1	4	
	41	0	
		3	
The true length, therefore, of the main-mast is .	123	0	feet.

The Author has followed the present method of measuring, in all his calculations relating to the Masts, (see pages from 92 to 113,) to adapt them to the dimensions furnished in our Dock-yards; but it may be advisable to change this system, and to adopt the more simple mode of measuring by feet, the actual length of a Mast, from the heel to the top of the *long* head.

DIMENSIONS OF SHIPS AND VESSELS.

DIMENSIONS OF SHIPS, AND THEIR LIGHT AND LOAD

Number of Guns	120	80	74	Razee, 50	52
	Feet. In.	Feet. In.	Feet. In.	Feet. In.	Feet. In.
Length of Deck	205 0	196 1½	176 0	173 8	172 0
„ of Keel for Tonnage	170 11	161 11½	145 1	144 8	144 9
Breadth for ditto	53 6	51 5¼	47 6	47 10	43 8
Extreme Breadth	54 5	52 0¼	48 2	48 6	44 2
Depth in Hold	23 2	22 6	21 0	13 10¾	14 6
Burthen in Tons, No.	2602	2279	1741	1761	1468
	Feet. In.	Feet. In.	Feet. In.	Feet. In.	Feet. In.
Draught of Water. Light. Forward	15 10	13 9	13 5	13 1	12 2
Light. Aft	18 2	18 4	17 6	17 2	15 0
Load. Forward	24 7	21 9	20 11	20 3	19 5
Load. Aft	26 0	25 0	23 9	21 6	20 5
Height of Ports. Fore	6 10	8 10	7 6	9 3	9 0
Midship	5 6	6 1	5 8	8 3	7 10
After	6 6	6 11	5 9	8 4	8 10

12 Inches additional Keel.

DRAUGHTS OF WATER, AND HEIGHT OF PORTS.

46		Razee Corvette, 26		28		Corvette, 18		Brig, 18		Brig, 10		Schooner.		Cutter.	
Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.
150	1½	145	0	113	8	112	0	100	0	90	0	80	0	67	3
125	1⅛	121	9⅜	94	8¾	92	1⅛	77	3½	73	7⅛	64	5½	51	4
39	11	38	2	31	6	30	6	30	6	24	6	23	0	24	3
40	3	38	6	31	10	30	10	30	9	24	8	23	2	24	5
12	9	13	3	9	0	13	10	12	9	11	0	9	10	10	7
1063		944		500		456		382		235		183		161	
Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.	Feet.	In.
10	9	10	11	9	8	10	0	6	6	7	9	6	1	5	4
15	6	14	4	11	10	11	10	11	4	10	2	9	0	11	10
17	6	17	0½	15	2	14	8	11	4	11	5	9	2	7	7
19	2	18	5½	15	7	15	3	14	7	12	6	11	8	14	5
8	1	9	4	5	2	5	7	5	5	4	9	4	7	5	9
7	3	8	5	4	11	4	11	4	9	4	4	3	5	3	2
8	1	9	10	5	5	5	10	5	10	4	8	3	7	3	11

6 Inches additional Keel.

WEIGHT OF THE VARIOUS ARTICLES COMPRISED

Number of Guns	120	80	74	Razee, 50	52
Weight of Timber	Tons. Cwt. 2197 10	Tons. Cwt. 1653 11	Tons. Cwt. 1406 2	Tons. Cwt. 1255 10	Tons. Cwt 904 0
„ Iron	136 0	119 10	109 4	96 13	67 0
„ Copper-Bolts	47 14	40 0	37 13	36 13	23 0
Sheets of Copper Sheathing. 28 oz.	No. 1166	No. 1800	No. 1472	No. 1329	No. 1350
32 oz.	3572	2050	1734	1706	1650
Total Number	4738	3850	3206	3035	3000
Weight of Copper Sheets	Tons. Cwt. 17 19	Tons. Cwt. 14 12	Tons. Cwt. 12 14	Tons. Cwt. 11 18	Tons. Cwt. 11 7
„ Mixed Metal Nails, &c.	2 18	2 5	2 2	1 14	1 18
„ Pintles and Braces	2 11	2 3	1 15	1 15	1 15
„ Lead of Sorts	9 0	8 9	8. 0	7 10	7 2
Number of Treenails	No. 64458	No. 35103	No. 27019	No. 25380	No. 23500

IN THE HULL OF EACH CLASS OF SHIP AND VESSEL.

46	Razee Corvette, 26	28	Corvette, 18	Brig, 18	Brig, 10	Schooner.	Cutter.
Tons. Cwt. 690 13	Tons. Cwt. 615 6	Tons. Cwt. 358 14	Tons. Cwt. 238 0	Tons. Cwt. 175 4	Tons. Cwt. 132 18	Tons. Cwt. 89 10	Tons. Cwt. 68 12
53 7	39 0	23 5	16 15	15 10	8 0	7 10½	5 1½
15 0	13 10	8 5	5 2	4 17	3 11	2 15	1 17
No. 1000	No. 850	No. 790	No. 850	No. 797	No. 580	No. 652	No. 550
1170	1130	600	613	301	200	80	.....
2170	1980	1390	1463	1098	780	732	550
Tons. Cwt. 9 4	Tons. Cwt. 7 14	Tons. Cwt. 5 10	Tons. Cwt. 5 2	Tons. Cwt. 3 19	Tons. Cwt. 3 3	Tons. Cwt. 2 12	Tons. Cwt. 2 1
1 12	1 10	0 18	1 1	0 12½	0 10½	0 8¾	0 6¾
1 9	1 0	0 11	0 11½	0 5½	0 5	0 4¾	0 4¼
5 4	4 9	4 10	4 7	4 2	3 0	2 3	1 2
No. 20826	No. 17300	No. 14540	No. 13050	No. 11193	No. 8316	No. 7100	No. 3250

WEIGHT OF THE VARIOUS ARTICLES COMPRISED

Number of Guns	120	80	74	Razee, 50	52
Weight of Oakum	Tons. Cwt. 16 1	Tons. Cwt. 13 10	Tons. Cwt. 11 10	Tons. Cwt. 9 7	Tons. Cwt. 6 10
„ Barrels of Pitch	5 7	4 6	4 12	3 18	3 17
Number	No. 50	No. 45	No. 43	No. 37	No. 36
* „ Barrels of Tar	Tons. Cwt. 11 13	Tons. Cwt. 11 7	Tons. Cwt. 11 5	Tons. Cwt. 11 5	Tons. Cwt. 7 0
Number	No. 109	No. 106	No. 105	No. 105	No. 66
*Whiting and White Lead	Tons. Cwt. 9 10	Tons. Cwt. 6 12	Tons. Cwt. 6 8	Tons. Cwt. 6 8	Tons. Cwt. 4 12
*Linseed Oil	1 5	1 5	1 5	1 5	1 1
Number of Gallons	No. 400	No. 400	No. 400	No. 400	No. 320
Three Coats of Paint	Tons. Cwt. 9 10	Tons. Cwt. 4 16	Tons. Cwt. 4 5	Tons. Cwt. 4 2	Tons. Cwt. 3 10
Ship's Weight when launched	2466 18	1882 6	1616 15	1447 18	1042 12

* Injected into the Ship's Frame, &c. in building.

IN THE HULL OF EACH CLASS OF SHIP AND VESSEL.

46	Razee Corvette, 26	28	Corvette, 18	Brig, 18	Brig, 10	Schooner.	Cutter.
Tons. Cwt. 4 18	Tons. Cwt. 4 1	Tons. Cwt. 4 0	Tons. Cwt. 3 12	Tons. Cwt. 3 0	Tons. Cwt. 2 0	Tons. Cwt. 1 12	Tons. Cwt. 1 8
2 18	1 17	1 5	1 3	1 4	0 15	0 15	0 11
No. 25	No. 18	No. 12	No. 11	No. 11	No. 7	No. 7	No. 5
Tons. Cwt. 4 13	Tons. Cwt. 4 2	Tons. Cwt. 2 7	Tons. Cwt. 1 18	Tons. Cwt. 1 15	Tons. Cwt. 0 15	Tons. Cwt. 0 11¼	Tons. Cwt. 0 10¼
No. 44	No. 39	No. 22	No. 18	No. 16	No. 7	No. 5¾	No. 5
Tons. Cwt. 2 12	Tons. Cwt. 2 7	Tons. Cwt. 2 4	Tons. Cwt. 1 12	Tons. Cwt. 1 5	Tons. Cwt. 0 15	Tons. Cwt. 0 13	Tons. Cwt. 0 5
0 18	0 16	0 6	0 4½	0 3	0 2	0 1½	0 0¾
No. 282	No. 256	No. 96	No. 60	No. 48	No. 32	No. 23	No. 11
Tons. Cwt. 2 15	Tons. Cwt. 2 8	Tons. Cwt. 2 2	Tons. Cwt. 1 15	Tons. Cwt. 1 13	Tons. Cwt. 0 13½	Tons. Cwt. 0 9¼	Tons. Cwt. 0 7½
795 3	698 0	413 17	281 3	213 10	156 8	109 6	82 7

WEIGHT OF THE MASTS AND YARDS, AND OF THE

Number of Guns	120	80	74	Razee, 50	52
	Ton. Cwt. Qr.	Ton. Cwt. Qr.	Ton. Cwt. Qr.	Ton. Cwt. Qr.	Ton. Cwt. Qr.
Lower Masts and Bowsprit	52 12 1	51 18 2	36 14 0	38 14 0	34 2 0
Topmasts and Yards Aloft	37 1 3	37 1 3	27 11 0	27 11 0	27 11 0
Total Weight Aloft	89 14 0	89 0 1	64 5 0	66 5 0	61 13 0
Spare-Gear and Booms	16 11 3	16 11 3	12 12 0	12 12 0	12 12 0
Total Weight of the Spars	106 5 3	105 12 0	76 17 0	78 17 0	74 5 0
The Rigging, &c. Standing	29 6 0	28 6 0	26 19 0	28 10 0	25 4 0
The Rigging, &c. Running	18 2 0	17 4 0	16 18 0	17 15 0	16 5 0
The Rigging, &c. Blocks	12 3 0	11 2 0	10 12 0	10 12 0	10 0 0
Total Weight of Rigging, &c.	59 11 0	56 12 0	54 9 0	56 17 0	51 9 0
Number of Fathoms of Rope from $\frac{3}{4}$ to 18 Inches in Circumference	Fathoms. 30250	Fathoms. 32400	Fathoms. 27152	Fathoms. 29200	Fathoms. 28700
Number of Blocks	No. 940	No. 940	No. 934	No. 934	No. 934

SPARE-GEAR, RIGGING AND BLOCKS, ETC.

46			Razee Corvette, 26			28			Corvette, 18			Brig, 18			Brig, 10			Schooner.			Cutter.		
Ton.	Cwt.	Qr.	Ton.	Cwt.	Qr.	Ton.	Cwt.	Qr.	Ton.	Cwt.	Qr.	Ton.	Cwt.	Qr.	Ton.	Cwt.	Qr.	Ton.	Cwt.	Qr.	Ton.	Cwt.	Qr.
21	12	3	21	5	1	9	2	0	9	2	0	7	9	2	4	5	2	6	8	0	5	9	2
18	12	3	18	12	3	8	15	2	8	15	2	7	3	1	5	15	1	1	18	2	2	12	0
40	5	2	39	18	0	17	17	2	17	17	2	14	12	3	10	0	3	8	6	2	.....		
7	10	2	7	10	0	4	2	0	4	2	0	3	0	2	2	4	3	1	3	0	.....		
47	16	0	47	8	0	21	19	2	21	19	2	17	13	1	12	5	2	9	9	2	8	1	2
14	13	0	14	13	0	12	10	0	12	18	0	5	0	0	3	5	0	2	2	0			
11	7	0	11	7	0	6	10	0	6	16	0	4	10	0	2	16	0	1	8	2	3	13	0
5	8	0	5	8	0	4	4	0	4	4	0	2	0	0	1	0	0	0	6	3			
31	8	0	31	8	0	23	4	0	23	18	0	11	10	0	7	1	0	3	17	1	3	13	0
Fathoms. 20728			Fathoms. 21370			Fathoms. 19031			Fathoms. 19350			Fathoms. 10709			Fathoms. 7335			.....			.....		
No. 893			No. 893			No. 848			No. 848			No. 576			No. 399			.....			.....		

THE NUMBER OF YARDS OF CANVAS IN THE SAILS, AND

Number of Guns		120	80	74	Razee 50	52
Ship's Sails	Yards of Canvas	No. 12517	No. 12947	No. 10784	No. 11130	No. 10824
	and Weight	T. Cwt. Qr. 6 19 3	T. Cwt. Qr. 7 5 3	T. Cwt. Qr. 6 0 2	T. Cwt. Qr. 6 14 0	T. Cwt. Qr. 6 1 0
Spare Sails	Yards of Canvas	No. 7584	No. 7844	No. 6650	No. 6876	No. 6690
	and Weight	T. C. Q. 4 4 0	T. C. Q. 4 7 0	T. C. Q. 3 14 1	T. C. Q. 4 5 0	T. C. Q. 3 14 0
Total Weight of the Sails		11 3 3	11 12 3	9 14 3	10 19 0	9 15 0
Cables	Hempen, No.	Brs. 5 Stm. 1	Brs. 5 Stm. 1	Brs. 5 Stm. 1	Brs. 5 Stm. 1	Brs. 5 Stm. 1
	Weight	T. C. Q. 32 10 0	T. C. Q. 29 15 0	T. C. Q. 25 4 0	T. C. Q. 25 4 0	T. C. Q. 25 4 0
	Iron, No.	Brs. 3 Stm. 1	Brs. 3 Stm. 1	Brs. 3 Stm. 1	Brs. 3 Stm. 1	Brs. 3 Stm. 1
	Weight	T. C. Q. 37 3 0	T. C. Q. 36 11 0	T. C. Q. 30 17 0	T. C. Q. 30 17 0	T. C. Q. 30 17 0
Total Weight of the Cables		69 13 0	66 6 0	56 1 0	56 1 0	56 1 0
„ Anchors		20 16 2	17 8 0	15 5 0	15 5 0	12 10 2
„ Cables and Anchors		90 9 2	83 14 0	71 6 0	71 6 0	68 11 2

THE WEIGHT OF THE SAILS, CABLES, AND ANCHORS.

46	Razee Corvette, 26	28	Corvette 18	Brig, 18	Brig, 10	Schooner.	Cutter.
No. 7307	No. 7381	No. 4796	No. 5096	No. 3547	No. 2740	No. 2790	No. 4140
T. Cwt. Qr. 3 15 2	T. Cwt. Qr 3 17 0	T. Cwt. Qr. 2 2 3	T. Cwt. Qr. 2 5 1	T. Cwt. Qr. 1 11 3	T. Cwt. Qr. 1 4 2	T. Cwt. Qr. 1 5 0	T. Cwt. Qr. 1 17 0
No. 5066	No. 5140	No. 3322	No. 3720	No. 2847	No. 1916	No. 1750	No. 589
T. C. Q. 2 5 2	T. C. Q. 2 6 0	T. C. Q. 1 9 3	T. C. Q. 1 13 1	T. C. Q 1 5 2	T. C. Q. 0 17 1	T. C. Q. 0 16 0	T. C. Q. 0 5 1
6 1 0	6 3 0	3 12 2	3 18 2	2 17 1	2 1 3	2 1 0	2 2 1
Brs. Stm. 4 1	Brs. Stm. 3 1	Brs. Stm. 3 1	Brs. Stm. 3 1	Brs. Stm. 2 1	Brs. Stm. 1 1	Brs. Stm. 0 1	Brs. Stm. .....
T. C. Q. 13 1 0	T. C. Q. 9 13 0	T. C. Q. 6 19 0	T. C. Q. 6 19 0	T. C. Q. 4 1 0	T. C. Q. 1 16 0	T. C. Q. 0 8 1	T. C. Q. .....
Brs. Stm. 3 1	Brs. Stm. 3 1	Brs. Stm. 3 1	Brs. Stm. 3 1	Brs. Stm. 3 1	Brs. Stm. 2 1	Brs. Stm. 3 0	Brs. Stm. 3 1
T. C. Q. 26 2 0	T. C. Q. 26 2 0	T. C. Q. 15 18 0	T. C. Q. 15 18 0	T. C. Q. 10 8 0	T. C. Q. 7 1 0	T. C. Q. 6 6 3	T. C. Q. 3 9 0
39 3 0	35 15 0	22 17 0	22 17 0	14 9 0	8 17 0	6 15 0	3 9 0
10 1 0	8 11 0	4 5 2	4 5 2	3 10 2	2 14 0	2 2 3	1 7 2
49 4 0	44 6 0	27 2 2	27 2 2	17 19 2	11 11 0	8 17 3	4 16 2

WEIGHT OF THE BALLAST, WATER, PROVISIONS, AND MEN, OF THE POWDER,

Number of Guns	120		80		74		Razee, 50		52	
	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.
Iron Ballast, and Tanks . .	373	0	247	0	196	0	100	0	187	0
Water	410	15	385	0	260	9	175	0	220	0
Coals and Wood	100	0	78	0	52	0	45	0	38	0
Provisions, Spirits, and Slops .	296	4	241	15	214	18	134	3	113	0
Men, Chests, &c.	102	6	78	0	65	0	48	0	45	0
Total Weight of the Stowage	1282	5	1029	15	788	7	502	3	603	0
Gunner's Stores	39	12½	27	2	22	2	18	0	16	0
Boatswain's and Carpenter's Stores	54	0	51	15	48	0	46	0	39	0
Total Weight of the Stores for Foreign Service . . .	93	12½	78	17	70	2	64	0	55	0
Guns, &c.	329	18	224	5	178	7	150	18	125	4
Powder, &c.	33	5	25	0	20	16½	18	12	13	18
Shot and Cases	125	14	98	12	79	17	80	12	58	2
Total Weight of the Guns, &c.	488	17	347	17	279	0½	250	2	197	4

GUNNER'S, BOATSWAIN'S, AND CARPENTER'S STORES, AND OF THE GUNS, AND SHOT.

46		Razee Corvette, 26		28		Corvette, 18		Brig, 18		Brig, 10		Schooner.		Cutter.	
Tons.	Cwt.	Tons.	Cwt.	Tons.	Tons.	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.
107	10	84	0	81 to 55		77	0	47	0	25	0	30	0	32	0
				Tons.	Cwt.										
110	0	106	0	55	5	50	0	32	0	19	0	11	0	4	5
32	0	21	0	15	0	10	0	8	10	6	0	4	0	2	0
69	4	59	0	31	15	28	10	23	14	6	10	6	8	3	2
27	3	20	0	18	2	14	7	14	7	8	14	4	12	2	15
345	17	290	0	201	2	179	17	125	11	65	4	56	0	44	2
12	11	11	10	7	10	6	5	5	17	2	2	1	8	0	18
31	0	31	0	16	0	14	10	12	5	8	7	4	$2\frac{1}{4}$	4	12
43	11	42	10	23	10	20	15	18	2	10	9	5	$10\frac{1}{4}$	5	10
80	7	68	8	31	3	21	17	21	17	8	$2\frac{1}{4}$	4	$7\frac{1}{2}$	3	8
11	$18\frac{3}{4}$	9	5	4	$18\frac{3}{4}$	2	15	2	15	1	10	0	$11\frac{1}{2}$	0	11
45	10	38	15	30	3	22	2	22	2	6	0	2	$5\frac{1}{2}$	2	10
137	$15\frac{3}{4}$	116	8	66	$4\frac{3}{4}$	46	14	46	14	15	$12\frac{1}{4}$	7	$4\frac{1}{2}$	6	9

WEIGHT OF THE BOATS, AND THE SHIP'S AND VESSEL'S

Number of Guns		120	80	74	Razee, 50	52
Weight of the Boats.		Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.
	Launch	5 8	5 2	5 2	5 2	4 3½
		2 No.	2 No.	2 No.	2 No.	2 No.
	Cutters	1 3	1 3	1 3	1 2	1 3
	Barge	1 10	1 10	1 10	1 10	1 10
	Pinnace	1 10	1 10	1 10	1 10	1 5¼
	Gig	.....	.....	.....	0 10¾	.....
	Jolly-Boat	0 9¾	0 9¾	0 9¾	0 9½	0 9¼
Total Weight of the Boats		10 0¾	9 14¾	9 14¾	10 4¼	8 11½

DISPLACEMENT OF EACH SHIP AND VESSEL,

	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.	Tons.	Cwt.
Weight of the Hull when launched	2466	18	1882	6	1616	15	1447	18	1042	12
Weight received on board	2142	5	1723	14	1359	11	1044	8	1067	16
Total Weight when complete	4609	3	3606	0	2976	6	2492	6	2110	8

DISPLACEMENT AT SEA, WHEN FITTED FOR FOREIGN SERVICE.

46	Razee Corvette, 26	28	Corvette, 18	Brig, 18	Brig, 10	Schooner.	Cutter.
Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.
4 3½	.....	.....	.....	.....	.....	.....	.....
2 No.	2 No.				Yawl.		
1 3	1 3	0 14¾	0 10¾	0 10¾	1 3	0 16	0 16
If Commodore.	Cutter.	2 Cutter Gigs					
1 10	0 14½	1 6	0 8	0 8	.....	.....	.....
1 10	1 10	1 5¼	1 5¼	1 5¼	.....	.....	.....
.....	0 9½	.....	.....	.....	0 9	0 13	0 13¼
0 9¾	....	0 9¾	0 7¾	0 7¾	0 9¾	0 7¾	0 4½
8 16¼	3 17	3 15¾	2 11¾	2 11¾	2 1¼	1 16¾	1 13¾

WHEN LAUNCHED AND WHEN AT SEA.

Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.	Tons. Cwt	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.
795 3	698 0	413 17	281 3	213 10	156 8	109 6	82 7
670 9	582 0	370 11	326 16	242 18	126 6	94 17	76 8
1465 12	1280 0	784 8	607 19	456 8	282 14	204 3	158 15

A TABLE shewing the Difference in the Immersion of a Ship in Fresh River Water, and in Sea Water; also, the relative Quantities of Water displaced, in Proportion to the Body of the Ship, or to the specific Gravity of River and Sea Waters.

Rate of Ship, or her Number of Guns.	The Ship deeper in River Water than in Sea-Water.	Difference in the two Load Lines, from the specific Gravity of Fresh and Salt Water.			Quantity to raise or immerse the Ship an Inch at the Load or Sea Line.	
No.	Inches.		Tons.	Cwt.	Tons.	Cwt.
120	$5\frac{7}{8}$	Equal to	143	8	24	0
74	$5\frac{1}{8}$	„	93	14	17	17
46	$3\frac{5}{8}$	„	45	6	12	5
28	$3\frac{1}{4}$	„	24	6	7	9
18	$2\frac{3}{4}$	„	14	6	5	13
10	$2\frac{1}{8}$	„	9	6	4	7
Cutter	$1\frac{3}{4}$	„	5	2	2	17

A TABLE shewing the WEIGHT OF TIMBER in a Green and Seasoned State, used in Ships and Vessels of War; it being, also, the data from which the Weight of the Timber Materials is calculated in computing the Ships' Displacements.

Names of Timber.	Per Cubic Foot.	
	Green.	Seasoned.
	lbs. oz.	lbs. oz.
English Oak	71 10	43 8
Dantzic Do.	49 14	36 0
African Teak	63 12	60 10
*Indian Do. Green or Seasoned about the same — Malabar	....	52 15
*Indian Do. Green or Seasoned about the same — Rangoon	....	26 4
Indian Mast Peon	48 3	36 0
Cedar	32 0	28 4
Larch	45 0	34 4
Riga Fir	48 12	35 8
New England Fir	44 12	30 11
Elm	66 8	37 5
Beech	60 0	53 6
Ash	58 3	50 0

* The Malabar Teak is the heaviest and the Rangoon the lightest of all Indian Teaks used in Ship Building.

Note.—The Average Weight of the Timber Materials in a Ship or Vessel of War is about 50 lbs. to the Cubic Foot; and for the Masts and Yards about 40 lbs.

THE RATE, PER TON, FOR LABOUR ON ALL CLASSES

		120	80	74	52
Number of Guns					
Rate per Ton, for		£ s. d.	£ s. d.	£ s. d.	£ s. d.
	Shipwrights	4 13 5½	4 2 8	4 7 4	4 0 0
	Caulkers	0 4 11	0 4 0	0 4 1	0 3 5
	Joiners	0 12 7	0 10 6	0 11 0	0 6 2
	Smiths	0 7 6½	0 6 4	0 6 6	0 6 7
	Painters	0 1 8	0 1 6	0 1 6	0 1 3
Total, per Ton		6 0 2	5 5 0	5 10 5	4 17 5
Total Amount for		£ s.	£ s.	£ s.	£ s.
	Shipwrights	12172 6	9435 0	7608 17	5872 0
	Caulkers	644 10	445 16	355 13	251 0
	Joiners	1639 14	1196 5	952 17	450 0
	Smiths	966 13	721 0	567 3	480 0
	Painters	220 0	178 0	130 10	90 0
Total Amount .*		15643 3	11976 1	9615 0	7143 0

* From these Sums 20 per Cent. must be deducted, to bring them to the Peace Rates.

OF SHIPS AND VESSELS, WITH THE TOTAL AMOUNT.

46	28	Corvette, 18	Brig, 18	Brig, 10	Schooner.	Cutter.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
4 11 1	5 15 2	4 12 0	4 14 9	4 16 0	4 11 10	4 6 3½
0 3 8	0 5 0½	0 5 4	0 5 4½	0 6 5	0 6 5	0 5 7
0 7 6	0 11 9	0 12 7	0 11 5¼	0 12 3	0 11 7	0 12 0
0 7 8	0 6 4½	0 5 3	0 4 0¾	0 2 9	0 2 10	0 2 8½
0 1 6	0 2 0	0 1 4	0 1 2½	0 1 4	0 1 6	0 1 5
5 11 5	7 0 4	5 16 6	5 16 10	5 18 9	5 14 2	5 8 0
£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
4842 7	2878 18	2090 18	1812 5	1130 15	840 0	694 15
201 6	126 19	123 13	102 10	73 9	58 10	45 2
398 6	296 6	290 15	219 3	144 18	106 2	96 3
404 5	156 8	120 0	78 2	30 4	26 2	22 0
80 0	50 0	31 0	22 0	16 0	14 6	12 0
5926 4	3508 11	2656 6	2234 0	1395 6	1045 0	870 0

TOTAL AMOUNT OF THE EXPENSES

Number of Guns	120	80	74	52
Rate, per Ton, for Labour . . .	£ s. d. 6 0 2	£ s. d. 5 5 0	£ s. d. 5 10 5	£ s. d. 4 17 5
„ „ Materials . .	29 18 7	23 7 9	28 0 3	20 3 2
Total	35 18 9	28 12 9	33 10 8	25 0 7
Proportion of Labour to the Cost of Materials	$\frac{5}{31}$	$\frac{5}{25}$	$\frac{5}{30}$	$\frac{5}{26}$
Total Expense of Labour . . .	£ 15643	£ 11976	£ 9615	£ 7143
„ „ Materials . . .	77878	53303	48773	29601
„ „ Ship's Hull . .	93521	65279	58388	36744
„ „ Masts and Yards .	3879	3506	2994	2598
„ „ Rigging and Blocks	2994	2997	2691	2013
Total	100394	71782	64073	41355
Furniture and Sea Stores	16805	15114	12433	9512
Total Expense of Equipment as above*	117199	86896	76506	50867

* Deduct 20 per cent. from these sums for Labour, and 18 per cent. for Materials, which will be about the difference between the War and Peace Rates.

FOR ALL CLASSES OF SHIPS AND VESSELS.

46	28	Corvette, 18	Brig, 18	Brig, 10	Schooner.	Cutter.
£ s. d. 5 11 5	£ s. d. 7 0 4	£ s. d. 5 16 6	£ s. d. 5 16 10	£ s. d. 5 18 9	£ s. d. 5 14 2	£ s. d. 5 8 0
20 18 5	24 4 1	19 12 7	17 13 9	19 11 9	19 9 0	19 6 5
26 9 10	31 4 5	25 9 1	23 10 7	25 10 6	25 3 2	24 14 5
$\frac{5}{24}$	$\frac{5}{23}$	$\frac{5}{23}$	$\frac{5}{20}$	$\frac{5}{21}$	$\frac{5}{22}$	$\frac{5}{23}$
£ 5926	£ 3508	£ 2656	£ 2234	£ 1395	£ 1045	£ 870
22237	12103	8954	6758	4604	3560	3110
28163	15611	11610	8992	5999	4605	3980
1477	745	635	526	327	200	351
1676	764	792	610	395	170	171
31316	17120	13037	10128	6721	4975	4502
7952	4434	3706	3285	2075	1380	1368
39268	21554	16743	13413	8796	6355	5870

A STATEMENT of the Loads of Rough Timber, Plank, &c. required for Building each Class of Ship and Vessel; of the Quantity that One Man can work up, in a Twelvemonth, in building; and of the Number of Men it will take to complete a Ship, in that time, for launching.

Rate of Ship, &c.	120	80	74	52	46	28	Corvette, 18	Brig, 18	Brig, 10	Schooner	Cutter
Quantity of Loads required . . .	5880	4339	3600	2372	1800	963	624	471	337	250	186
Do. that one Man can work up in a Twelvemonth .	29½	28¾	29¾	25¾	23¾	22	18½	17½	18½	18½	17
Number of Men to build a Ship in the same period	200	153	122	91½	76	44½	33¾	27¾	18	13½	11

N.B.—The above are cast at the War Rate, and the following at the Peace Rate, at a Reduction of 20 per Cent.

Number of Men to build . . .	160	122½	97	69	60¾	35½	27	22¼	14½	10¾	8¾
Quantity of Loads for One Man .	35½	34¼	35¾	30	28½	26	22¼	21	22	22	20½

RATES,

WITH THEIR COMPLEMENTS OF MEN, AND GUNS.

RATES, WITH THEIR COMPLEMENTS OF MEN

Rates.	Number of		Gun Deck.	
	Men.	Guns.	No.	Pounders.
First Rate	900	120	30 2	32 Guns. 68 Carr.
	800		30 2	32 Guns. 68 Carr.
Second „	650 to 700	80	30	32 Guns.
Third „	600 „ 650	74	28	32 „
Fourth (Razee)	450	50	..	....
„ Rate	350 „ 450	50 to 70	..	....
Fifth „	280 „ 300	36 „ 50	..	....
The Razee Corvette	205 „ 220	26	..	....
Sixth Rate	125 „ 175	24 to 36	..	....
Sloop	115 „ 135	18	..	....
„ Brig	75 „ 95	14	..	....
„ Do.	50 „ 60	10	..	....
Schooner	30 „ 50	6	..	....
Cutter	30 „ 50	8	..	....

AND NUMBER OF GUNS.

Middle Deck.		Upper Deck.		Quarter Deck.		Fore-Castle.		Poop.	
No.	Pounders.	No.	Pounders.	No.	Pounders.	No.	Pounders.	No.	Pounders.
34	32 Guns.	34	32 Guns.	2 14	18 Guns. 32 Carr.	2 2	18 Guns. 32 Carr.	..	....
34	24 „	34	24 „	2 14	18 Guns. 32 Carr.	2 2	18 Guns. 32 Carr.	..	....
..	....	32	24 „	4 12	24 Guns. 32 Carr.	4 2	24 Guns. 32 Carr.	6	18 Carr.
..	....	28	18 „	4 10	12 Guns. 32 Carr.	2 2	12 Guns. 32 Carr.	..	....
..	....	28	32 „	14	32 Guns.	6	32 Guns.	..	....
..	....	30	24 „	2 14	24 Guns. 42 Carr.	4 2	24 Guns. 42 Carr.	..	....
..	....	28	18 „	2 14	9 Guns. 32 Carr.	2 2	9 Guns. 32 Carr.	..	....
..	....	26	32 „	...	....	..	....	..	....
..	....	20	32 Carr.	6	18 Carr.	2	9 Guns.	..	....
..	....	16 2	32 Carr. 6 Guns.	...	....	..	....	..	....
..	....	12 2	24 Carr. 6 Guns.	...	....	..	....	..	....
..	....	8 2	18 Carr. 6 Guns.	...	....	..	....	..	....
..	....	4 2	12 Carr. 6 Guns.	...	....	..	....	..	....
..	....	6 2	6 Guns. 6 Brass.	...	....	..	....	..	....

THE FIRST RATE.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE FIRST

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qr.
The Iron Ballast and Tanks	373	0	0			
Water	410	15	0			
Provisions, Spirits, and Slops	296	4	0	1282	5	0
Coals and Wood	100	0	0			
Men and their Effects	102	6	0			
Bowsprit	11	3	2			
Fore-Mast	15	18	0			
Main-Mast	20	2	3	52	12	1
Mizen-Mast	5	8	0			
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.	37	1	3			
				89	14	0
Spare Top-Masts, Booms, &c.				16	11	3
Fitted Rigging	29	6	0			
Running Rigging	18	2	0	59	11	0
Blocks	12	3	0			

RATE; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

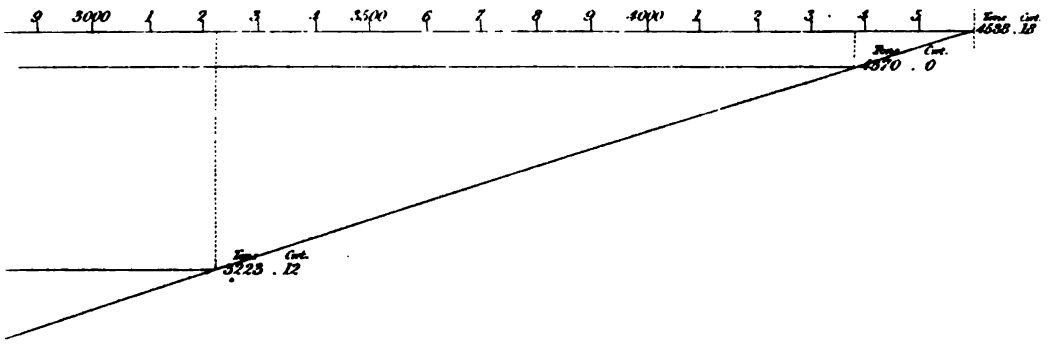
	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 12517) . . .	6	19	3			
Spare Set, (Ditto 7582)	4	4	0	11	3	3
Cables { Hempen Bowers No. 5; Stream . No. 1 .	32	10	0			
Cables { Iron Ditto 3; Ditto . . 1 .	37	3	0	90	9	2
Anchors, Ditto 4; Ditto 1 Kedge 2 .	20	16	2			
Boats and their Gear				10	0	3
Boatswain's and Carpenter's Stores, Rope, &c.				54	0	0
Gunner's Stores, with Breechings, Tackles, &c.				39	12	2
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	329	18	0			
Gunpowder, &c.	33	5	0	488	17	0
Shot of every Sort	125	14	0			
Total Weight received onboard				2142	5	1
Ship's Hull				*2466	18	0
Total Weight of the Ship, when complete for Foreign Service. Tons				4609	3	1

* This is the actual weight of the various articles comprising the Hull of the Ship; see page 6.
For the Displacement at the Light Line, by measurement, see page 30.

THE FIRST RATE'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	20	12
Ditto Ditto Load Line	24	0
Ditto of One Foot of the Midship Section at the Light Line	16	10
Ditto Ditto Load Line	29	17
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation	2	$7\frac{3}{4}$
Ditto above the lower Side of the Keel	16	$8\frac{1}{2}$
Ditto below the Load-Water-Line	8	7
		Feet.
Area in Feet of the Light-Water-Line		8662
Ditto Load-Water-Line		10096
Displacement in Feet at the Launching Line		86098
Ditto Load Line		160614
	Tons.	**Cwt.**
Displacement in Tons at the Light Line	2459	18
Ditto Load Line	4588	18

612 . Tons .



splacement

THE 80-GUN SHIP.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 80-GU

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qr.
The Iron Ballast and Tanks	247	0	0			
Water	385	0	0			
Provisions, Spirits, and Slops	241	15	0			
Coals and Wood	78	0	0			
Men and their Effects	78	0	0	1029	15	0
Bowsprit	11	0	2			
Fore-Mast	15	12	0			
Main-Mast	20	0	0			
Mizen-Mast	5	6	0	51	18	2
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.	37	1	3	89	0	1
Spare Top-Masts, Booms, &c.				16	11	3
Fitted Rigging	28	6	0			
Running Rigging	17	4	0			
Blocks	11	2	0	56	12	0

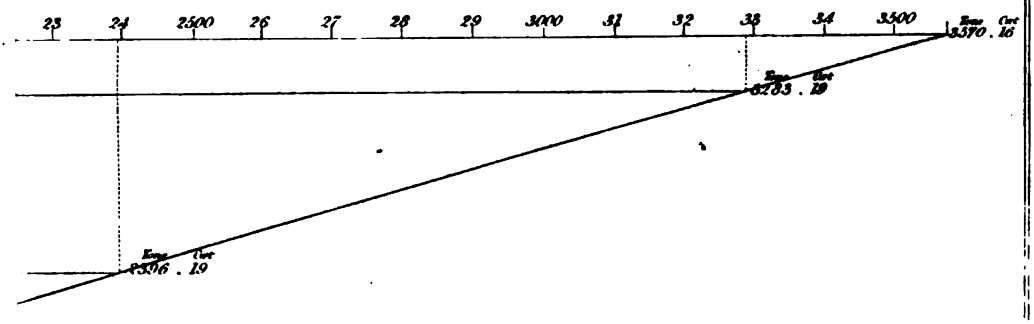
SHIP; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 12947) . . .	7	5	3			
Spare Set, (Ditto 7844) . . .	4	7	0	11	12	3
Cables { Hempen Bowers No, 5; Stream . No. 1 .	29	15	0			
Cables { Iron Ditto 3; Ditto . . 1 .	36	11	0	83	14	0
Anchors, Ditto 4; Ditto 1 Kedge 1 .	17	8	0			
Boats and their Gear				9	14	3
Boatswain's and Carpenter's Stores, Rope, &c.				51	15	0
Gunner's Stores, with Breechings, Tackles, &c..				27	2	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	224	5	0			
Gunpowder, &c.	25	0	0	347	17	0
Shot of every Sort	98	12	0			
Total Weight received onboard				1723	14	2
Ship's Hull				1882	6	0
Total Weight of the Ship, when complete for Foreign Service . Tons				3606	0	2

THE 80-GUN SHIP'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	17	12
Ditto Ditto Load Line	21	11
Ditto of One Foot of the Midship Section at the Light Line	15	18
Ditto Ditto Load Line	26	13
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation	1	$9\frac{1}{3}$
Ditto above the lower Side of the Keel	14	$11\frac{3}{8}$
Ditto below the Load-Water-Line	8	$4\frac{1}{8}$
	Feet.	
Area in Feet of the Light-Water-Line	7409	
Ditto Load-Water-Line	9065	
Displacement in Feet at the Launching Line	65296	
Ditto Load Line	124977	
	Tons.	**Cwt.**
Displacement in Tons at the Light Line	1865	12
Ditto Load Line	3570	16

Sheet.



Section of Road

THE 74-GUN SHIP.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 74-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	196	0	0			
Water	260	9	0			
Provisions, Spirits, and Slops	214	18	0	788	7	0
Coals and Wood	52	0	0			
Men and their Effects	65	0	0			

	Tons.	Cwt.	Qrs.				
Bowsprit	8	8	0				
Fore-Mast	10	4	0				
Main-Mast	14	6	0	36	14	0	
Mizen-Mast	3	16	0				64 5 0
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.				27	11	0	
Spare Top-Masts, Booms, &c.							12 12 0
Fitted Rigging				26	19	0	
Running Rigging				16	18	0	54 9 0
Blocks				10	12	0	

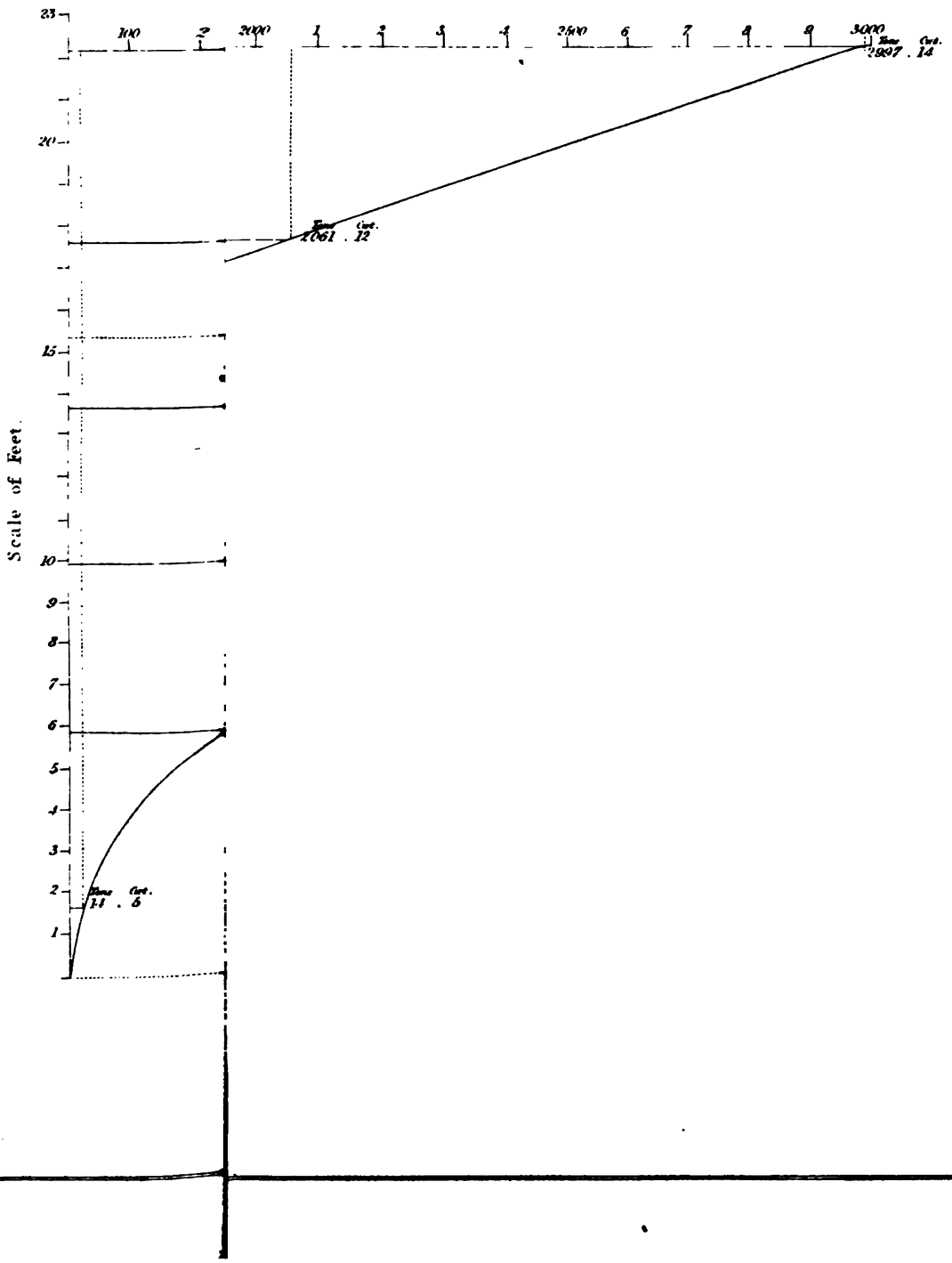
SHIP; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 10784) . . .	6	0	2	9	14	3
Spare Set, (Ditto 6655) . . .	3	14	1			
Cables { Hempen Bowers No. 5; Stream . No. 1 .	25	4	0	71	6	0
Cables { Iron Ditto 3; Ditto . . 1 .	30	17	0			
Anchors, Ditto 4; Ditto 1 Kedge 1 .	15	5	0			
Boats and their Gear				9	14	3
Boatswain's and Carpenter's Stores, Rope, &c.				48	0	0
Gunner's Stores, with Breechings, Tackles, &c.				22	2	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	178	7	0	279	0	2
Gunpowder, &c.	20	16	2			
Shot of every Sort	79	17	0			
Total Weight received onboard				1359	11	0
Ship's Hull				1616	15	0
Total Weight of the Ship, when complete for Foreign Service . Tons				2976	6	0

THE 74-GUN SHIP'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	15	5
Ditto Ditto Load Line	17	17
Ditto of One Foot of the Midship Section, at the Light Line .	12	7
Ditto Ditto Load Line .	21	3
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation . .	1	$10\frac{1}{8}$
Ditto above the lower Side of the Keel .	14	$3\frac{1}{2}$
Ditto below the Load-Water-Line . .	8	$0\frac{1}{2}$
	Feet.	
Area in Feet, of the Light-Water-Line	6420	
Ditto Load-Water-Line	7517	
Displacement in Feet, at the Launching Line	56287	
Ditto Load Line	104920	
	Tons.	**Cwt.**
Displacement in Tons, at the Light Line	1608	2
Ditto Load Line	2997	14

1. Tons.


100
2
2000
1
2
3
4
2500
6
7
8
9
3000
Tons
2997 . 14
Cwt.
2061 . 12
Tons
Cwt.
11 . 6
Scale of Feet.

THE RAZEE OF 50 GUNS.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE RAZEE 80-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	100	0	0			
Water	175	0	0			
Provisions, Spirits, and Slops	134	3	0	502	3	0
Coals and Wood	45	0	0			
Men and their Effects	48	0	0			
Bowsprit	8	8	0			
Fore-Mast	10	18	2			
Main-Mast	14	6	0			
Mizen-Mast	5	1	2			
	38	14	0			
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.	27	11	0	66	5	0
Spare Top-Masts, Booms, &c.				12	12	0
Fitted Rigging	28	10	0			
Running Rigging	17	15	0	56	17	0
Blocks	10	12	0			

SHIP; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

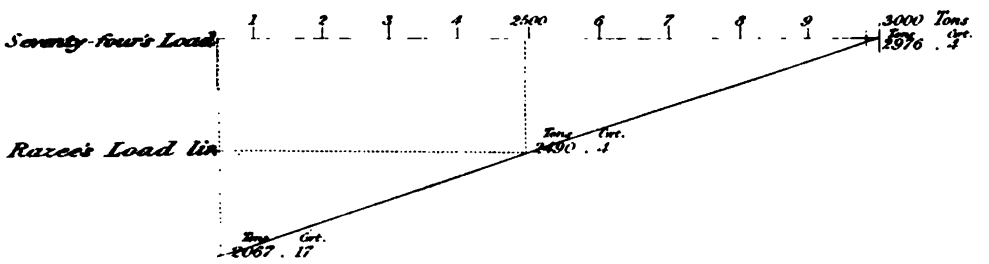
	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 11130)	6	14	0	10	19	0
Spare Set, (Ditto 6876) . . .	4	5	0			
Cables { Hempen Bowers No. 5; Stream . No. 1 .	25	4	0	71	6	0
Cables { Iron Ditto 3; Ditto . . . 1 .	30	17	0			
Anchors, Ditto 4; Ditto 1 Kedge 1 .	15	5	0			
Boats and their Gear				10	4	0
Boatswain's and Carpenter's Stores, Rope, &c.				46	0	0
Gunner's Stores, with Breechings, Tackles, &c.				18	0	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	150	18	0	250	2	0
Gunpowder, &c.	18	12	0			
Shot of every Sort	80	12	0			
Total Weight received onboard				1044	8	0
Ship's Hull				1447	18	0
Total Weight of the Ship, when complete for Foreign Service . Tons				2492	6	0

THE RAZEE 50-GUN SHIP'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	14	6
Ditto Ditto Load Line	17	2
Ditto of One Foot of the Midship Section, at the Light Line	11	14
Ditto Ditto Load Line	18	4
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation	1	$9\frac{3}{4}$
Ditto above the lower Side of the Keel	13	$8\frac{1}{4}$
Ditto below the Load-Water-Line	7	$2\frac{1}{4}$
	Feet.	
Area in Feet, of the Light-Water-Line	6016	
Ditto Load-Water-Line	7190	
Displacement in Feet, at the Launching Line	50673	
Ditto Load Line	87154	
	Tons.	**Cwt.**
Displacement in Tons, at the Light Line	1447	18
Ditto Load Line	2490	4

	Feet.	In.	Tons.	Cwt.
She is lighter than she was as a 74, at the Light Line	1	$0\frac{1}{2}$ =	168	16
Ditto Load Line	2	$4\frac{1}{2}$ =	486	0

...edi Class.



Seventy-Four's Ligh

Razee's Light lin ship

Scale of Feet.

Old Ke

THE 52-GUN FRIGATE.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 52-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qr.
The Iron Ballast and Tanks	187	0	0			
Water	220	0	0			
Provisions, Spirits, and Slops	113	0	0	603	0	0
Coals and Wood	38	0	0			
Men and their Effects	45	0	0			
Bowsprit	8	8	0			
Fore-Mast	9	7	0			
Main-Mast	12	16	0	34	2	0
Mizen-Mast	3	11	0			
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.	27	11	0			
				61	13	0
Spare Top-Masts, Booms, &c.				12	12	0
Fitted Rigging	25	4	0			
Running Rigging	16	5	0	51	9	0
Blocks	10	0	0			

FRIGATE; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 10824)	6	1	0			
Spare Set, (Ditto 6640)	3	14	0	9	15	0
Cables { Hempen Bowers No. 5; Stream . No. 1	25	4	0			
Cables { Iron Ditto 3; Ditto . . 1	30	17	0	68	11	2
Anchors, Ditto 4; Ditto 1 Kedge 1	12	10	2			
Boats and their Gear				8	11	2
Boatswain's and Carpenter's Stores, Rope, &c.				39	0	0
Gunner's Stores, with Breechings, Tackles, &c.				16	0	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	125	4	0			
Gunpowder, &c.	13	18	0	197	4	0
Shot of every Sort	58	2	0			
Total Weight received onboard				1067	16	0
Ship's Hull				1042	12	0
Total Weight of the Ship, when complete for Foreign Service. Tons				2110	8	0

THE 52-GUN FRIGATE'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	12	18
Ditto Ditto Load Line	16	2
Ditto of One Foot of the Midship Section at the Light Line	8	9
Ditto Ditto Load Line	17	6
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation	2	$8\frac{1}{4}$
Ditto above the lower Side of the Keel	13	$3\frac{3}{8}$
Ditto below the Load-Water-Line	6	$7\frac{5}{8}$
	Feet.	
Area in Feet of the Light-Water-Line	5436	
Ditto Load-Water-Line	6777	
Displacement in Feet at the Launching Line	36074	
Ditto Load Line	75420	
	Tons.	**Cwt.**
Displacement in Tons at the Light Line	1030	12
Ditto Load Line	2154	16

THE 46-GUN FRIGATE.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 46-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qr.
The Iron Ballast and Tanks	107	10	0			
Water	110	0	0			
Provisions, Spirits, and Slops	69	4	0	345	17	0
Coals and Wood	32	0	0			
Men and their Effects	27	3	0			

	Tons.	Cwt.	Qrs.			
Bowsprit	4	19	3			
Fore-Mast	6	4	3			
Main-Mast	7	18	3	21	12	3
Mizen-Mast	2	9	2			
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.				18	12	3
				40	5	2
Spare Top-Masts, Booms, &c.				7	10	2
Fitted Rigging	14	13	0			
Running Rigging	11	7	0	31	8	0
Blocks	5	8	0			

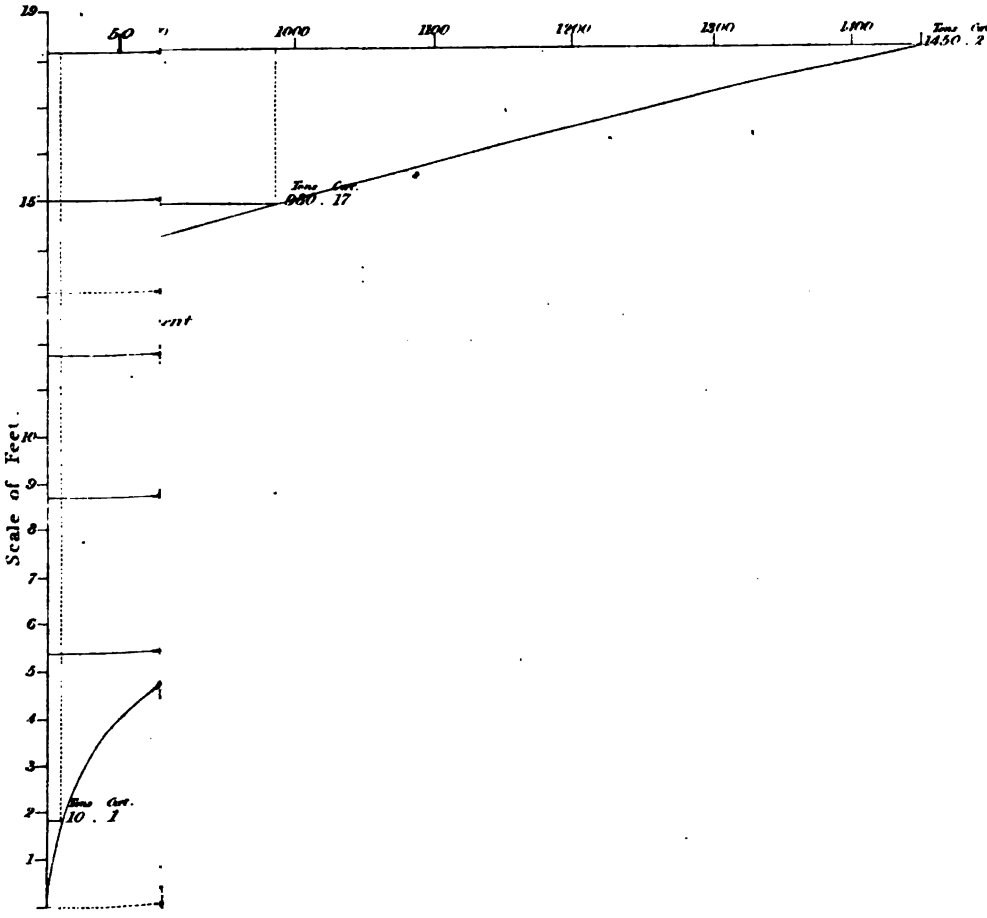
FRIGATE; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 7307)	3	15	2			
Spare Set, (Ditto 5066)	2	5	2	6	1	0
Cables { Hempen Bowers No, 4; Stream . No. 1	13	1	0			
Cables { Iron Ditto 3; Ditto . . 1	26	2	0	49	4	0
Anchors, Ditto 4; Ditto 1 Kedge 1	10	1	0			
Boats and their Gear				8	16	1
Boatswain's and Carpenter's Stores, Rope, &c.				31	0	0
Gunner's Stores, with Breechings, Tackles, &c..				12	11	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	80	7	0			
Gunpowder, &c.	11	18	3	137	15	3
Shot of every Sort	45	10	0			
Total Weight received onboard				670	9	0
Ship's Hull				795	3	0
Total Weight of the Ship, when complete for Foreign Service . Tons				1465	12	0

THE 46-GUN FRIGATE'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	9	6
Ditto Ditto Load Line	12	5
Ditto of One Foot of the Midship Section at the Light Line	8	4
Ditto Ditto Load Line	14	4
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation	3	$9\frac{3}{4}$
Ditto above the lower Side of the Keel	12	$6\frac{1}{4}$
Ditto below the Load-Water-Line	5	$9\frac{3}{4}$
	Feet.	
Area in Feet of the Light-Water-Line	3920	
Ditto Load-Water-Line	5143	
Displacement in Feet at the Launching Line	26725	
Ditto Load Line	50755	
	Tons.	**Cwt.**
Displacement in Tons at the Light Line	763	6
Ditto Load Line	1450	2

ate of 1063. Tons.



THE RAZEE CORVETTE OF 26 GUNS.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE COMPLETE FOR

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	84	0	0			
Water	106	0	0			
Provisions, Spirits, and Slops	59	0	0	290	0	0
Coals and Wood	21	0	0			
Men and their Effects	20	0	0			

	Tons.	Cwt.	Qrs.				
Bowsprit	4	17	3				
Fore-Mast	6	2	3				
Main-Mast	7	16	1	21	5	1	
Mizen-Mast	2	8	2				39	18	0
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.				18	12	3	
Spare Top-Masts, Booms, &c.							7	10	0
Fitted Rigging				14	13	0	
Running Rigging				11	7	0	31	8	0
Blocks				5	8	0	

RAZEE CORVETTE OF 26 GUNS; AND HER TOTAL WEIGHT, WHEN FOREIGN SERVICE.

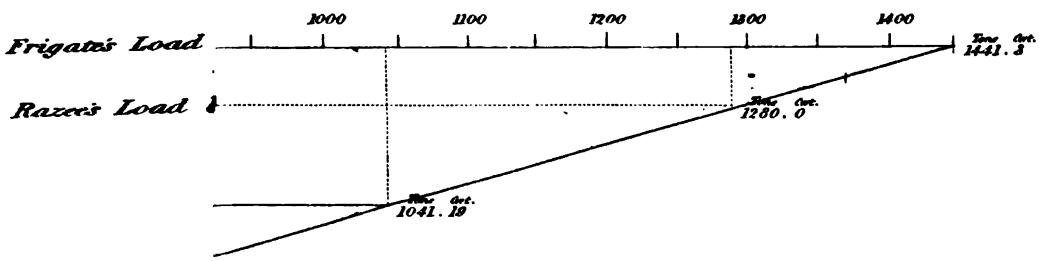
	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 7381)	3	17	0	6	3	0
Spare Set, (Ditto 5140)	2	6	0			
Cables Hempen Bowers No. 3; Stream . No. 1	9	13	0	44	6	0
Cables Iron Ditto 3; Ditto . . . 1	26	2	0			
Anchors, Ditto 4; Ditto 1 Kedge 1	8	11	0			
Boats and their Gear				3	17	0
Boatswain's and Carpenter's Stores, Rope, &c.				31	0	0
Gunner's Stores, with Breechings, Tackles, &c.				11	10	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	68	8	0	116	8	0
Gunpowder, &c.	9	5	0			
Shot of every Sort	38	15	0			
Total Weight received onboard				582	0	0
Ship's Hull				698	0	0
Total Weight of the Vessel, when complete for Foreign Service . Tons				1280	0	0

THE RAZEE CORVETTE'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	8	18
Ditto Ditto Load Line	11	10
Ditto of One Foot of the Midship Section, at the Light Line	6	10
Ditto Ditto Load Line	12	15
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation	2	3
Ditto above the lower Side of the Keel	11	8½
Ditto below the Load-Water-Line	6	0½
	Feet.	
Area in Feet, of the Light-Water-Line	3753	
Ditto Load-Water-Line	4734	
Displacement in Feet, at the Launching Line	24430	
Ditto Load Line	44805	
	Tons.	**Cwt.**
Displacement in Tons, at the Light Line	698	0
Ditto Load Line	1280	0

	Feet.	In.	Tons.	Cwt.
She is lighter than she was as a Frigate, at the Light Line	0	8 =	70	0
Ditto Load Line	0	14 =	161	3

Class of 26 Guns.



Frigate's Light } Displacement as a Frigate
Razee's Light }

Razee Corvette

Scale of Feet.

Old

THE 28-GUN SHIP.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 28-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	81	0	0			
Water	55	5	0			
Provisions, Spirits, and Slops	31	15	0	201	2	0
Coals and Wood	15	0	0			
Men and their Effects	18	2	0			
Bowsprit	2	1	0			
Fore-Mast	2	9	2			
Main-Mast	3	2	0	9	2	0
Mizen-Mast	1	9	2			
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.	8	15	2			
Spare Top-Masts, Booms, &c.				17	17	2
Fitted Rigging	12	10	0			
Running Rigging	6	10	0	23	4	0
Blocks	4	4	0			
				4	2	0

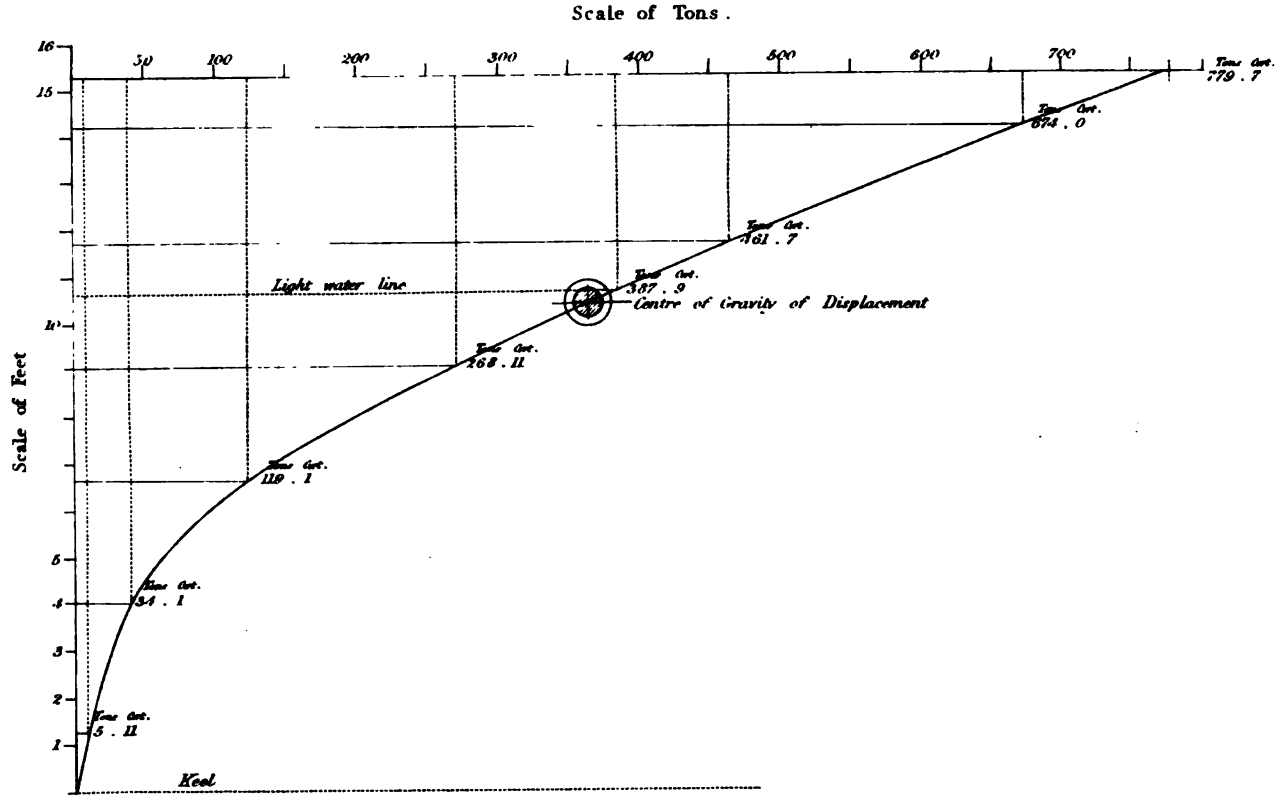
SHIP; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 4796)	2	2	3	3	12	2
Spare Set, (Ditto 3322)	1	9	3			
Cables { Hempen Bowers No. 3; Stream . No. 1	6	19	0	27	2	2
Cables { Iron Ditto 3; Ditto . . 1	15	18	0			
Anchors, Ditto 3; Ditto 1 Kedge 1	4	5	2			
Boats and their Gear				3	15	3
Boatswain's and Carpenter's Stores, Rope, &c.				16	0	0
Gunner's Stores, with Breechings, Tackles, &c.				7	10	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	31	3	0	66	4	3
Gunpowder, &c.	4	18	3			
Shot of every Sort	30	3	0			
Total Weight received onboard				370	11	0
Ship's Hull				413	17	0
Total Weight of the Ship, when complete for Foreign Service . Tons				784	8	0

THE 28-GUN SHIP'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	6	12
Ditto Ditto Load Line	7	9
Ditto of One Foot of the Midship Section, at the Light Line .	5	1
Ditto Ditto Load Line .	9	7
	Feet.	In.
Centre of Gravity of Displacement afore the Centre of Flotation . .	1	10
Ditto above the lower Side of the Keel .	10	$5\frac{5}{8}$
Ditto below the Load-Water-Line. . .	4	$10\frac{7}{8}$
	Feet.	
Area in Feet, of the Light-Water-Line	2774	
Ditto Load-Water-Line.	3144	
Displacement in Feet, at the Launching Line	13568	
Ditto Load Line	27277	
	Tons.	Cwt.
Displacement in Tons, at the Light Line	387	9
Ditto Load Line	779	7

Scale of Capacity for the 28 Gun ship of 500 Tons.



THE 18-GUN CORVETTE OF 455 TONS.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 18-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	77	0	0			
Water	50	0	0			
Provisions, Spirits, and Slops	28	10	0	179	17	0
Coals and Wood	10	0	0			
Men and their Effects	14	7	0			
Bowsprit	2	1	0			
Fore-Mast	2	9	2			
Main-Mast	3	2	0	9	2	0
Mizen-Mast	1	9	2			
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.	8	15	2			
				17	17	2
Spare Top-Masts, Booms, &c.				4	2	0
Fitted Rigging	12	18	0			
Running Rigging	6	16	0	23	18	0
Blocks	4	4	0			

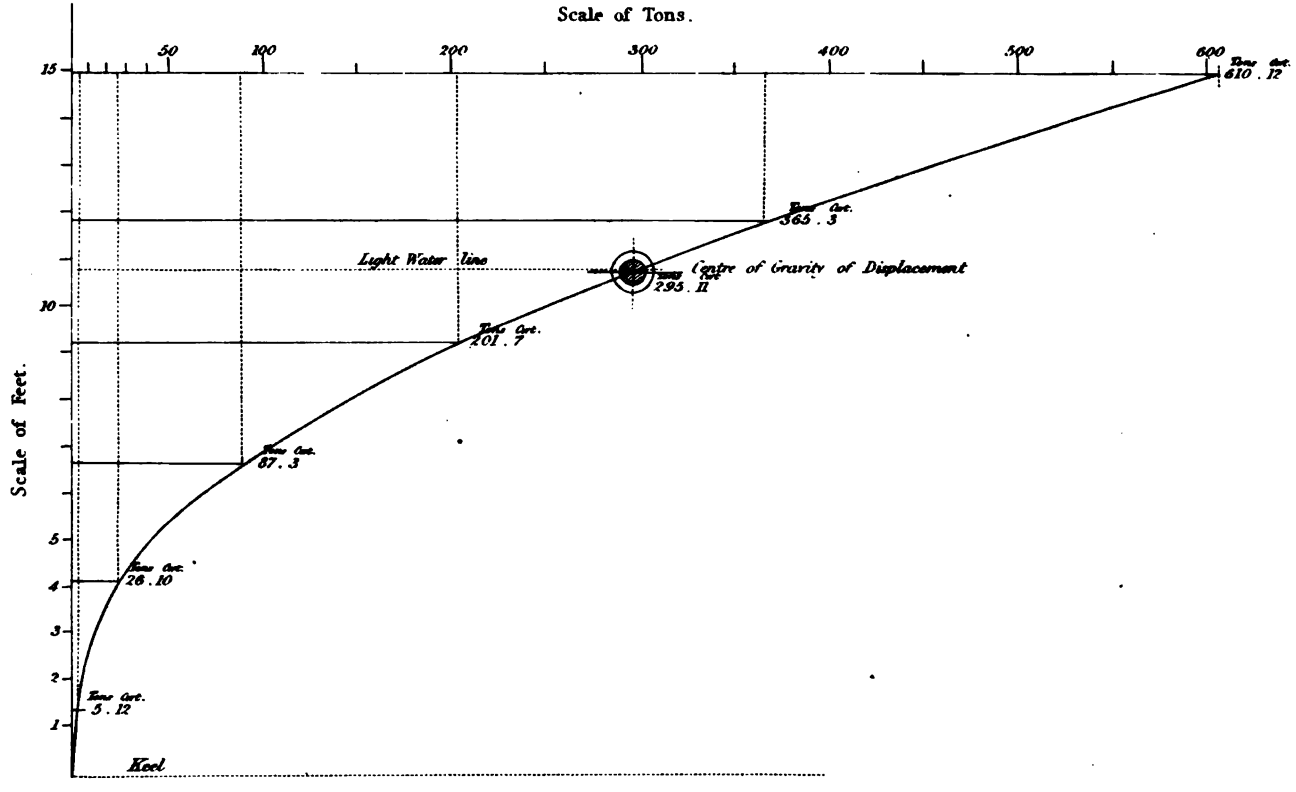
CORVETTE; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 5096)	2	5	1			
Spare Set, (Ditto 3720)	1	13	1	3	18	2
Cables { Hempen Bowers No. 3; Stream . No. 1	6	19	0			
Cables { Iron Ditto 3; Ditto . . 1	15	18	0	27	2	2
Anchors, Ditto 3; Ditto 1 Kedge 1	4	5	2			
Boats and their Gear				2	11	3
Boatswain's and Carpenter's Stores, Rope, &c.				14	10	0
Gunner's Stores, with Breechings, Tackles, &c.				6	5	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	21	17	0			
Gunpowder, &c.	2	15	0	46	14	0
Shot of every Sort	22	2	0			
Total Weight received onboard				326	16	1
Ship's Hull				281	3	0
Total Weight of the Ship, when complete for Foreign Service . Tons				607	19	1

THE 18-GUN CORVETTE'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	5	13
Ditto Ditto Load Line	7	$0\frac{3}{4}$
Ditto of One Foot of the Midship Section, at the Light Line	3	10
Ditto Ditto Load Line	7	5
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation	2	$3\frac{1}{2}$
Ditto above the lower Side of the Keel	10	$9\frac{3}{8}$
Ditto below the Load-Water-Line	4	$2\frac{1}{8}$
	Feet.	
Area in Feet, of the Light-Water-Line	2376	
Ditto Load-Water-Line	2960	
Displacement in Feet, at the Launching Line	10344	
Ditto Load Line	21371	
	Tons.	**Cwt.**
Displacement in Tons, at the Light Line	295	11
Ditto Load Line	610	12

Scale of Capacity for the 18 Gun-Corvette of 455 Tons.



Pl. 9

THE 18-GUN BRIG OF 382 TONS.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 18-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	47	0	0			
Water	32	0	0			
Provisions, Spirits, and Slops	23	14	0	125	11	0
Coals and Wood	8	10	0			
Men and their Effects	14	7	0			
Bowsprit	1	13	3			
Fore-Mast	2	13	2	7	9	2
Main-Mast	3	2	1			
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.	7	3	1	14	12	3
Spare Top-Masts, Booms, &c.				3	0	2
Fitted Rigging	5	0	0			
Running Rigging	4	10	0	11	10	0
Blocks	2	0	0			

BRIG; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

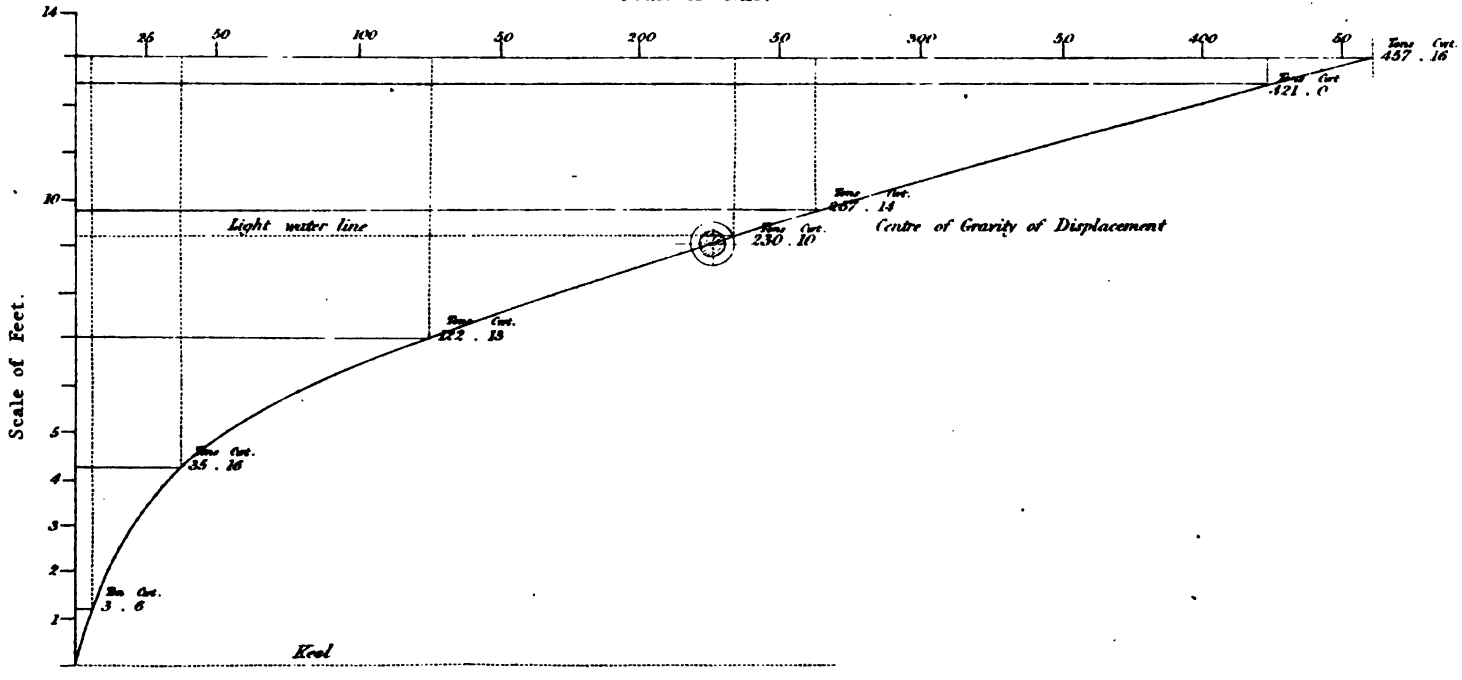
	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 3547)	1	11	3	2	17	1
Spare Set, (Ditto 2847)	1	5	2			
Cables { Hempen Bowers No. 2; Stream . No. 1.	4	1	0	17	19	2
Cables { Iron Ditto 3; Ditto . . 1.	10	8	0			
Anchors, Ditto 3; Ditto 1 Kedge 1.	3	10	2			
Boats and their Gear				2	11	3
Boatswain's and Carpenter's Stores, Rope, &c.				12	5	0
Gunner's Stores, with Breechings, Tackles, &c.				5	17	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	21	17	0	46	14	0
Gunpowder, &c.	2	15	0			
Shot of every Sort	22	2	0			
Total Weight received onboard				242	18	3
Ship's Hull				213	10	0
Total Weight of the Ship, when complete for Foreign Service . Tons				456	8	3

*

THE 18-GUN BRIG'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	4	10
Ditto Ditto Load Line	5	13
Ditto of One Foot of the Midship Section, at the Light Line .	3	11
Ditto Ditto Load Line .	6	10
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation . .	1	$7\frac{1}{2}$
Ditto above the lower Side of the Keel .	8	$11\frac{1}{2}$
Ditto below the Load-Water-Line . .	4	$0\frac{1}{2}$
	Feet.	
Area in Feet, of the Light-Water-Line	1911	
Ditto Load-Water-Line	2392	
Displacement in Feet, at the Launching Line	8068	
Ditto Load Line	16035	
	Tons.	**Cwt.**
Displacement in Tons, at the Light Line	230	10
Displacement in Tons, at the Load Line	457	16

Scale of Capacity for the 18 Gun Brig of 382 Tons.



Pl. 10.

THE 10-GUN BRIG OF 235 TONS.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE 10-GUN

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	25	0	0			
Water	19	0	0			
Provisions, Spirits, and Slops	6	10	0	65	4	0
Coals and Wood	6	0	0			
Men and their Effects	8	14	0			

	Tons.	Cwt.	Qrs.				Tons.	Cwt.	Qrs.
Bowsprit	1	1	0						
Fore-Mast	1	7	0	4	5	2			
Main-Mast	1	17	2				10	0	3
Top-Masts, Top-Gallant-Masts, Yards, Caps, &c.				5	15	1			
Spare Top-Masts, Booms, &c.							2	4	3
Fitted Rigging				3	5	0			
Running Rigging				2	16	0	7	1	0
Blocks				1	0	0			

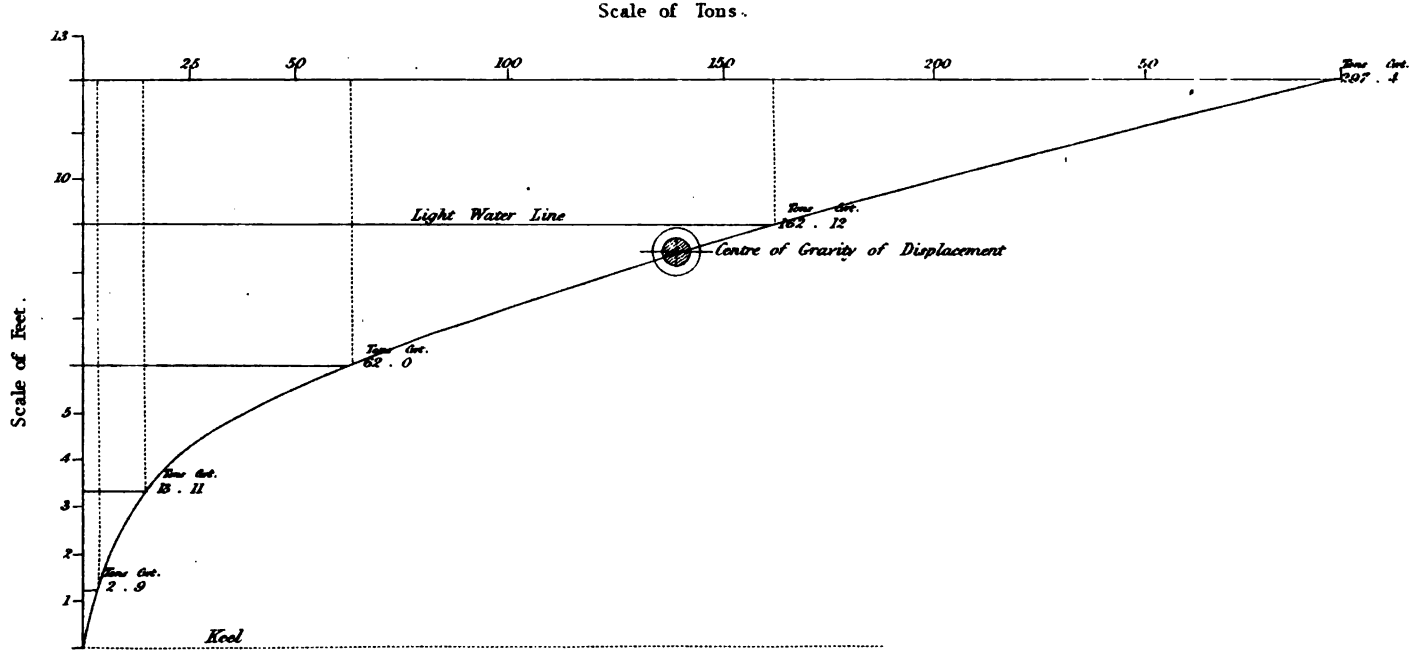
BRIG; AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 2740) . . .	1	4	2	2	1	3
Spare Set, (Ditto 1916) . . .	0	17	1			
Cables { Hempen Bowers No. 1; Stream . No. 1 .	1	16	0	11	11	0
Cables { Iron Ditto 2; Ditto . .	1 . 7	1	0			
Anchors, Ditto 3; Ditto 1, Kedge 1 .	2	14	0			
Boats and their Gear				2	1	3
Boatswain's and Carpenter's Stores, Rope, &c.				8	7	0
Gunner's Stores, with Breechings, Tackles, &c.				2	2	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	8	2	1	15	12	1
Gunpowder, &c.	1	10	0			
Shot of every Sort	6	0	0			
Total Weight received onboard				126	6	1
Vessel's Hull				156	8	0
Total Weight of the Vessel, when complete for Foreign Service . Tons				282	14	1

THE 10-GUN BRIG'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	3	10
Ditto Ditto Load Line	4	7
Ditto of One Foot of the Midship Section, at the Light Line .	2	10
Ditto Ditto Load Line .	4	8
	Feet.	In.
Centre of Gravity of Displacement afore the Centre of Flotation . .	1	$3\frac{1}{8}$
Ditto above the lower Side of the Keel .	8	$2\frac{1}{8}$
Ditto below the Load-Water-Line . .	3	$9\frac{3}{8}$
	Feet.	
Area in Feet, of the Light-Water-Line	1488	
Ditto Load-Water-Line	1842	
Displacement in Feet, at the Launching Line	5693	
Ditto Load Line	10404	
	Tons.	Cwt.
Displacement in Tons, at the Light Line	162	12
Ditto Load Line	297	4

Scale of Capacity for the 10 Gun - Brig of 235 Tons.



THE SCHOONER OF 183 TONS.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE SCHOONER,

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	30	0	0			
Water	11	0	0			
Provisions, Spirits, and Slops	6	8	0	56	0	0
Coals and Wood	4	0	0			
Men and their Effects	4	12	0			
Bowsprit	1	6	0			
Fore-Mast	2	10	0	6	8	0
Main-Mast	2	12	0			
Top-Masts, Top-Gallant-Masts, Yards, Caps, and Cross-trees				1	18	2
						8 6 2
Spare Top-Masts, Booms, &c.						1 3 0
Fitted Rigging	2	2	0			
Running Rigging	1	8	2			3 17 1
Blocks	0	6	3			

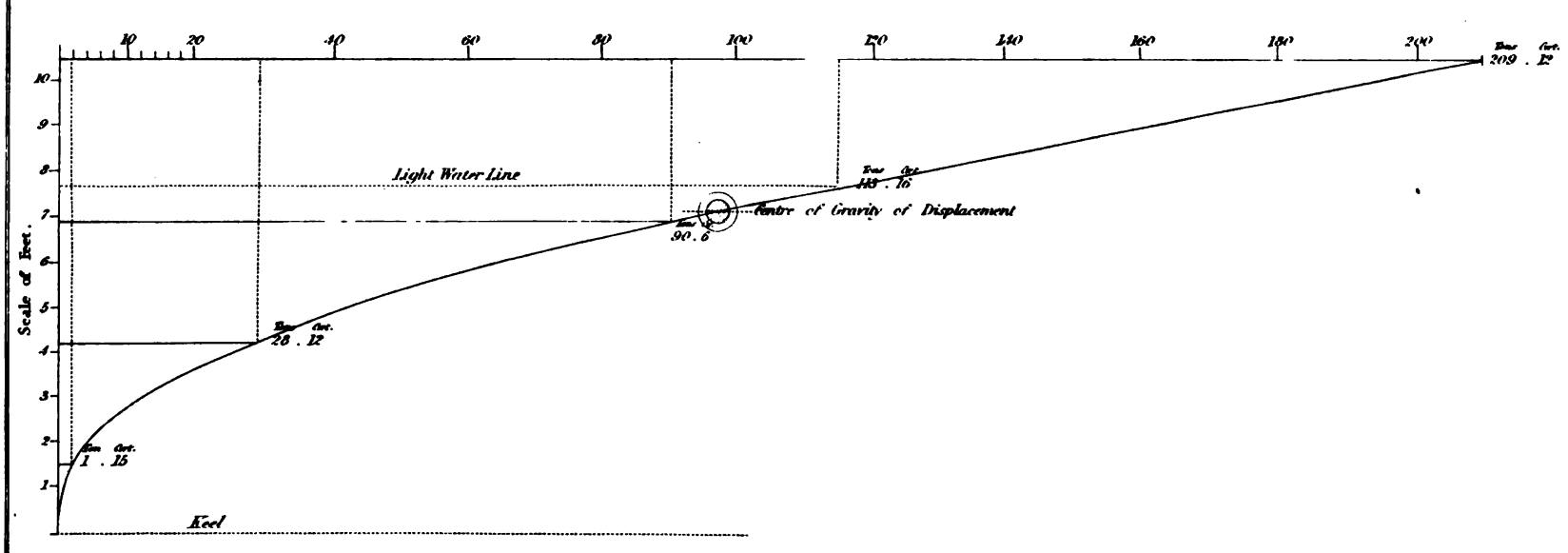
AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 2790)	1	5	0	2	1	0
Spare Set, (Ditto 1750)	0	16	0			
Cables — Hempen . No. 1	0	8	1	8	17	3
Cables — Iron Bowers . No. 3	6	6	3			
Anchors, Ditto 3; Stream . No. 1	2	2	3			
Boats and their Gear				1	16	3
Boatswain's and Carpenter's Stores, Rope, &c.				4	2	1
Gunner's Stores, with Breechings, Tackles, &c.				1	8	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	4	7	2			
Gunpowder, &c.	0	11	2	7	4	2
Shot of every Sort	2	5	2			
Total Weight received onboard				94	17	0
Vessel's Hull				109	6	0
Total Weight of the Vessel, when complete for Foreign Service . Tons				204	3	0

THE SCHOONER'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	2	13
Ditto Ditto Load Line	3	10
Ditto of One Foot of the Midship Section, at the Light Line .	1	13
Ditto Ditto Load Line .	3	6
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation . .	3	$1\frac{1}{8}$
Ditto above the lower Side of the Keel .	7	$3\frac{1}{8}$
Ditto below the Load-Water-Line. . .	3	$1\frac{7}{8}$
		Feet.
Area in Feet, of the Light-Water-Line		1118
Ditto Load-Water-Line.		1447
Displacement in Feet, at the Launching Line		3983
Ditto Load Line		7338
	Tons.	**Cwt.**
Displacement in Tons, at the Light Line	113	16
Ditto Load Line	209	12

Scale of Capacity for the Schooner of 183 Tons.



Pl. 12.

THE CUTTER OF 161 TONS.

THE WEIGHT OF EVERY THING FORMING THE EQUIPMENT OF THE CUTTER;

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Iron Ballast and Tanks	32	0	0			
Water	4	5	0			
Provisions, Spirits, and Slops	3	2	0	44	2	0
Coals and Wood	2	0	0			
Men and their Effects	2	15	0			

	Tons.	Cwt.	Qrs.			
Bowsprit	1	15	2			
Fore-Mast	2	18	2	5	9	2
Boom	0	15	2			
Top-Mast, Gaff, Yards, and Spare Gear				2	12	0
				8	1	2

Fitted Rigging			
Running Rigging	3	13	0
Blocks			

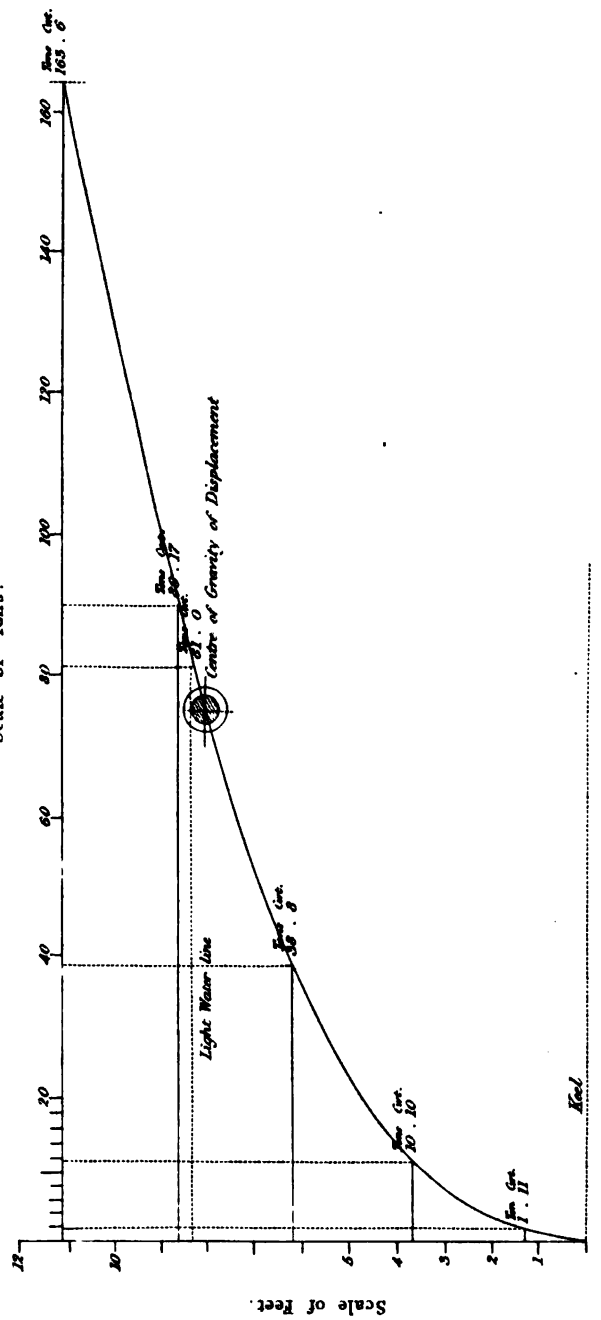
AND HER TOTAL WEIGHT, WHEN COMPLETE FOR FOREIGN SERVICE.

	Tons.	Cwt.	Qrs.	Tons.	Cwt.	Qrs.
The Sails, (Yards of Canvas in them 4140)	1	17	0			
Spare Set, (Ditto 589)	0	5	1	2	2	1
Cables { Hempen Bowers . . Stream						
Cables { Iron Ditto No. 3; Ditto . No. 1 .	3	9	0	4	16	2
Anchors, Ditto 3; Ditto . . 1 .	1	7	2			
Boats and their Gear				1	13	3
Boatswain's and Carpenter's Stores, Rope, &c.				4	12	0
Gunner's Stores, with Breechings, Tackles, &c.				0	18	0
	Tons.	Cwt.	Qrs.			
Guns, Carronades, &c.	3	8	0			
Gunpowder, &c.	0	11	0	6	9	0
Shot of every Sort	2	10	0			
Total Weight received onboard				76	8	0
Vessel's Hull				82	7	0
Total Weight of the Vessel, when complete for Foreign Service. Tons				158	15	0

THE CUTTER'S DISPLACEMENT PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	2	4
Ditto Ditto Load Line	2	17
Ditto of One Foot of the Midship Section, at the Light Line .	2	4
Ditto Ditto Load Line .	3	15
	Feet.	**In.**
Centre of Gravity of Displacement abaft the Centre of Flotation . .	1	$1\frac{1}{8}$
Ditto above the lower Side of the Keel .	8	$0\frac{1}{8}$
Ditto below the Load-Water-Line . .	3	$0\frac{1}{8}$
		Feet.
Area in Feet, of the Light-Water-Line		924
Ditto Load-Water-Line		1200
Displacement in Feet, at the Launching Line		2835
Ditto Load Line		5725
	Tons.	**Cwt.**
Displacement in Tons, at the Light Line	81	0
Ditto Load Line	163	6

Scale of Capacity for a Cutter of 161 Tons.



DESCRIPTION AND WEIGHT OF ORDNANCE, ETC.

WEIGHT OF GUNS, CARRONADES, AND CARRIAGES.

Pounders.		Guns.			Carriages.			Total.		
		Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.
Guns	6	20	1	0	2	3	24	23	0	24
	9	25	2	10	3	3	0	29	1	10
	12	32	0	0	4	3	0	36	3	0
	18	36	0	0	5	2	0	41	2	0
	24	47	2	0	6	3	0	54	1	0
	32	49	0	0	8	0	0	57	0	0
	32	54	2	0	8	2	0	63	0	0
	32	63	0	0	9	1	0	72	1	0
Carronades	12	6	1	0	3	0	0	9	1	0
	18	10	1	0	4	1	14	14	2	14
	24	13	1	20	5	2	0	18	3	20
	32	17	3	0	6	2	14	24	1	14
	42	22	3	0	7	2	0	30	1	0
	68	36	0	0	10	0	0	46	0	0
Gun-Carronade	68	50	2	0	9	3	20	61	1	20

NEW STATEMENT OF NAVAL ORDNANCE, ETC.

Pounders.		Length.	Weight.	Charge of Powder.	
				Full.	Reduced.
		Ft. In.	Cwt.	lbs. oz.	lbs. oz.
Guns	10 Inches*	9 4	84	12 0	. . .
	68 Pounders	8 0	60	9 0	. . .
		6 8	50	7 0	. . .
	32 „	9 7	63	10 11	8 0
		9 6	56		
		8 0	48	8 0	6 0
		6 6	32	5 0	4 0
		6 0	25	4 0	3 0
		5 4			
	24 „	9 6	50	8 0	6 0
		9 0	47½		
		7 6	40	6 0	5 0
	18 „	9 0	42½	6 0	4 8
		8 0	37½		
	12 „	9 0	34	4 0	3 0
		7 6	29½		
	9 „	7 6	26	3 0	2 4
	6 „	6 0	17	2 0	1 8
Carronades	42 „	4 6	22	3 8	. . .
	32 „	4 0	17	2 11	. . .
	24 „	3 4	10	1 8	. . .
	12 „	2 8	6	1 0	. . .

* For large Steam-Vessels.

ESTABLISHMENT OF GUNPOWDER.

Rates.	War Proportion. Number of					Peace Proportion. Number of			
	Guns.	Barrels.	Cases.	Half Cases.	Quarter Cases.	Cases.	Half Cases.	Barrels.	Half Barrels.
First	120	616	. .	8	1	404	14	35	. .
	108	557	. .	8	1	. .	. .	. .	. .
	104	440	. .	8	1	. .	. .	. .	. .
Second	84	530	. .	8	1	397	10	30	. .
	80	430	. .	8	1	. .	. .	. .	. .
Third	78	410	. .	8	1	. .	. .	. .	. .
	76	388	. .	8	1	. .	. .	. .	. .
	74	335	. .	8	1	260	10	26	1
Fourth	56	192	. .	6	1	. .	. .	. .	. .
	52	. .	. .	. .	. .	194	17	. .	. .
	50	243	. .	6	1	. .	. .	. .	. .
Razee	50	. .	. .	. .	. .	257	17	. .	. .
Fifth	46	187	. .	6	1	60	6	108	2
	42	173	. .	6	1	. .	. .	. .	. .
Razee Corvette	26	. .	. .	. .	. .	70	10	63	2
Sixth	28	. .	66	5	1	42	5	32	2
	26	. .	58	5	1	. .	. .	. .	. .
Sloops	20	. .	46	4	2	. .	. .	. .	. .
	18	. .	36	4	2	38	2	1	. .
	10	. .	16	2	1	15	2	1	. .
Schooner	. .	. .	. .	. .	. .	8	2	2	. .
Cutter	. .	. .	. .	. .	. .	8	2	2	. .

Note.—A Case contains 120 lbs. and a Barrel 90 lbs. of Powder; and a Case and a Barrel are of the same Dimensions, 21 inches long and 17 inches square, or in Diameter; but three Cases are equal in Contents, to four Barrels.

THE WEIGHT AND NUMBER OF CARTRIDGES OF GUNPOWDER IN BARRELS AND CASES, ETC.

Pounders.		Weight of Cartridges, &c.		Number in Barrel.		Number in Case.		Diameter of Shot.
		Full Charge.	Reduced Charge.	Full.	Reduced.	Full.	Reduced.	
		lbs. oz.	lbs. oz.	No.	No.	No.	No.	Inches.
For the Guns . . .	3	0 12	. . .	74 (in	Half	Cases.)	. . .	$3\frac{1}{8}$
	6	2 0	1 8	42	. . .	57	. . .	$3\frac{1}{2}$
	9	3 0	2 4	28	38	38	50	4
	12	4 0	3 0	21	28	28	38	$4\frac{3}{8}$
	18	6 0	4 8	13	18	19	24	5
	24	8 0	6 0	10	13	14	19	$5\frac{1}{2}$
	32	10 10	8 0	7	10	10	14	$6\frac{1}{8}$
Carronades. .	6	0 8	. . .	100 (in	Half	Cases.)	. . .	. . .
	9	0 12	. . .	82	. . .	. . .	. . .	. . .
	12	1 0	. . .	73	. . .	. . .	. . .	. . .
	18	1 8	. . .	54	. . .	. . .	. . .	. . .
	24	2 0	. . .	42	. . .	. . .	. . .	. . .
	32	2 10	. . .	29	. . .	. . .	. . .	. . .
	42	3 8	. . .	22	. . .	. . .	. . .	. . .
	68	5 10	. . .	15	. . .	. . .	. . .	. . .
Gun Carronade .	68	7 0	. . .	12	. . .	16	. . .	8

THE NUMBER OF YARDS OF CANVAS

IN THE

SAILS, ETC.

The average Number of Yards of Canvas required for the under-mentioned Sails for each Class of Ship and Vessel.

Sails.	120 Guns.	80	74	50 Razee.	52	46	26 Razee Corvette.	28	18 Corvette.	18 Brig.	10 Brig.
Jib	426	403	390	402	372	246	235	173	179	136	116
Fore-Course	683	748	656	760	649	515	470	300	300	288	211
Fore-Topsail	806	811	714	714	714	518	507	334	334	331	257
Fore-Top-Gallant-Sail . . .	218	206	183	183	183	133	128	83	83	117	79
Main-Course	904	1004	918	948	829	620	626	392	427	374	293
Main Topsail	1007	1003	903	903	903	643	635	418	418	334	248
Main Top-Gallant-Sail . . .	290	276	248	248	248	173	173	105	104	116	79
Mizen Topsail	463	463	415	415	415	332	332	200	199	..	..
Mizen Top-Gallant-Sail . .	139	136	125	125	125	96	96	56	56	..	..
Driver	552	630	527	612	516	399	396	249	259	379	280

A SCALE of the relative Proportions of Iron Cables to Hempen Cables, and of their Weight.

Weight of 100 Fathoms.					
IRON CABLES.			HEMPEN CABLES.		
Diameter.	Brunton's.	Brown's.	Equal to	Size.	Weight.
Inches.	Cwt. Qrs. lbs.	Cwt. Qrs. lbs.		Inches.	Cwt. Qrs. lbs.
				$7\frac{1}{2}$	10 2 9
$\frac{3}{4}$	29 0 17	28 0 3	. . . .	8	12 0 26
				$8\frac{1}{2}$	13 3 16
				9	15 2 25
$\frac{7}{8}$	39 1 21	35 2 6	. . . .	$9\frac{1}{2}$	17 0 22
				10	19 0 21
1	50 0 14	45 3 5	. . . .	$10\frac{1}{2}$	21 0 20
				11	23 1 0
				$11\frac{1}{2}$	25 0 15
$1\frac{1}{8}$	65 3 5	58 2 11	. . . .	12	27 1 23
				$12\frac{1}{2}$	29 3 3
				13	32 1 19
$1\frac{1}{4}$	81 3 12	74 2 13	. . . .	$13\frac{1}{2}$	35 0 7
				14	37 2 24
$1\frac{3}{8}$	94 0 7	85 0 2	. . . .	$14\frac{1}{2}$	40 1 12
				15	43 0 1
				$15\frac{1}{2}$	45 3 27
$1\frac{1}{2}$	110 0 7	100 2 14	. . . .	16	48 3 24
				$16\frac{1}{2}$	51 3 2
$1\frac{5}{8}$	136 1 10	125 2 0	. . . .	17	55 1 0
				$17\frac{1}{2}$	58 2 6
$1\frac{3}{4}$	155 0 9	138 0 4	. . . .	18	61 3 13
				$18\frac{1}{2}$	65 2 1
$1\frac{7}{8}$	180 3 14	180 1 14	. . . .	19	69 0 17
				20	76 3 1
				21	84 1 14
2	194 0 14	.....	. . . .	22	92 2 16
				23	101 2 8
				24	110 2 1
$2\frac{1}{8}$	216 0 0	.....	. . . .	25	119 3 2
				26	129 2 22

A NEW TABLE of the Number of Chain and Hempen Cables allowed: Iron at 75 Fathoms and Hempen at 101 Fathoms.

Rates.	Chain.		Hempen.		Remarks.
	No.	Fathoms long.	No.	Fathoms long.	
First, Second, and Third .	4	75	4	101	Three Chain Cables of 100 Fathoms each Cable, are to be considered equal to Four of 75 Fathoms in length.
Fourth and Fifth . . .	4	75	3	101	
Sixth	4	75	2	101	
Sloops	3	75	1	101	
Cutters	2	75	1	101	

An Account of the Time in which 20 Riggers could fit the Rigging and Blocks of each Class of Ship and Vessel.

Class of Ship and Vessel.	Hours.	Remarks.
120 Guns . .	300	
74 to 60 „ . .	285	
50 „ . .	260	*Note.*—This statement is made from actual observation, and from notes taken on the spot.
46 „ . .	230	
28 „ . .	140	
18 Corvette .	110	
18 Brig . .	105	
10 „ . . .	80	

A TABLE of the Weight of 100 Fathoms of Cable-laid Rope, from 2 to 26 Inches in Circumference.

Size.	Thrds	Weight.			Size.	Thrds	Weight.			Size.	Thrds	Weight.			Size.	Thrds	Weight.		
In.	No.	Cwt.	Qrs.	lbs.	In.	No.	Cwt.	Qrs.	lbs.	In.	No.	Cwt.	Qrs.	lbs.	In.	No.	Cwt.	Qrs.	lbs.
2	27	0	3	26	8½	378	13	3	15	15	1170	43	0	1	21½	2403	88	1	10
2½	36	1	1	8	9	423	15	2	25	15½	1251	45	3	26	22	2520	92	2	16
3	54	1	3	25	9½	468	17	0	22	16	1332	48	3	24	22½	2646	97	1	3
3½	72	2	2	16	10	522	19	0	21	16½	1413	51	3	21	23	2763	101	2	8
4	90	3	1	6	10½	576	21	0	19	17	1503	55	1	0	23½	2880	105	3	14
4½	108	3	3	24	11	630	23	0	18	17½	1593	58	2	6	24	3006	110	2	1
5	135	4	3	23	11½	684	25	0	15	18	1683	61	3	13	24½	3132	115	0	16
5½	162	5	3	22	12	747	27	1	23	18½	1782	65	2	1	25	3258	119	3	2
6	189	6	3	21	12½	810	29	3	3	19	1881	69	0	17	25½	3393	124	2	26
6½	216	7	3	21	13	882	32	1	19	19½	1980	72	3	4	26	3528	129	2	22
7	252	9	1	1	13½	954	35	0	7	20	2088	76	3	1	..	..	.	.	.
7½	288	10	2	9	14	1026	37	2	24	20½	2187	80	1	16	..	..	.	.	.
8	333	12	0	26	14½	1098	40	1	12	21	2295	84	1	14	..	..	.	.	.

A TABLE of every Description of Cask, Iron Tank, and Package usually supplied to Ships, with Provisions; shewing also the Contents, Weight, and Dimensions of each, and the Weight of the several Species of Provisions, &c.

Denomination of Casks, Tanks, &c.	Measure in Gallons.			Tare of each Cask, &c.			Water in each.			Length.	Breadth.	Depth.	Diameter.
	Wines.	Beer.	New Standard.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	In.	In.	In.	In.
Leager	190	156	159	2	3	23	14	0	24	59	..	..	38
Butt	131	108	110	1	2	9	9	3	10	53	..	..	33
Puncheon	88	72	73	1	0	14	6	2	7	41½	..	..	30
Hogshead	66	54	55	0	3	12	4	3	19	37	..	..	28
Barrel	44	36	36¾	0	2	16	3	1	3	31½	..	..	22
Half Hogshead	33	27	27½	0	2	3	2	1	23	28	..	..	20
Kilderkin	22	18	18¼	0	1	16	1	2	15	25½	..	..	18
Firkin	11	9	9⅛	0	1	0	0	3	7	20½	..	..	15
Tank	464	380½	387	7	0	0	34	2	20	48	48	48	..
Half Ditto	227	186	189	3	2	0	16	3	23	38	38	38	..
Quarter Ditto	112	92	93½	2	0	24	8	1	15	38	38	19	..
Bilge Ditto	130	106½	108¼	2	2	20	9	2	23	38	33	28	..
Gunpowder Case	..	..	..	0	1	15	1	0	8	21	17	17	..
Gunpowder Barrel	..	..	..	0	1	26	0	3	6	21	..	..	17

WEIGHT OF PROVISIONS, AND

Species of Provisions.	Contents of each Cask, &c.	Tare of each Cask, &c.	Casks.	
			Length.	Diameter.
	lbs.	lbs.	Inches.	Inches.
Bread, in Bags	112	2	..	..
Beef, Irish, in Half Puncheons	304	60	31½	25
„ Barrels	208	42	28	21
Pork, Irish, in Half Puncheons	320	60	30	25
„ Barrels	208	42	27	21
Flour, in Hogsheads	560	86	36	28
„ Half Hogsheads	280	45	27	22
„ Barrels	360	52	30	24
Suet, in Barrels	280	52	30	24
„ Half Hogsheads	180	45	27	22
Raisins, in Barrels	336	60	30	25
„ Half Hogsheads	224	44	26	22
Sugar, in Hogsheads	560	100	35	28
„ Half Hogsheads	260	66	28	22
„ Barrels	372	77	30	25
Cocoa, in Hogsheads	336	86	36	28
„ Half Hogsheads	150	45	27	22
„ Barrels	224	52	30	24
Tobacco, in Barrels	150	52	31	24
„ Half Hogsheads	100	45	26	23
Butter, in Firkins	65	14	17	14
Cheese, in Casks	120	30	29	18

DIMENSIONS OF CASKS AND PACKAGES.

Species of Provisions.	Contents of each Cask, &c.	Tare of each Cask, &c.	Dimensions.		
			Length.	Diameter or Breadth.	Depth.
	lbs.	lbs.	Inches.	Inches.	Inches.
Tea, in Cases	180	126	39	25	25
„ Half Cases	105	90	39	24	16
„ Quarter Cases	60	58	39	16	15
Soap, in Cases	224	45	33	17	17
„ Half Cases	112	28	26	16	13
Lime Juice, in Cases	72	110	32	18	14
	Gallons.				
Pease, in Hogsheads	60	86	36	30	..
„ Barrels	40	52	32	24	..
„ Half Hogsheads	28	45	27	23	..
Oatmeal, in Hogsheads	92	86	36	28	..
„ Barrels	60	52	31	24	..
„ Half Hogsheads	40	45	26	23	..
Vinegar, in Hogsheads	63	100	35	28	..
„ Barrels	45	77	31	24	..
„ Half Hogsheads	32	66	26	22	..
Spirits, in Puncheons	84	128	40	30	..
„ Hogsheads	63	100	35	28	..
„ Barrels	42	77	32	25	..
„ Half Hogsheads	32	66	27	22	..
Wine, in Pipes	126	165	52	33	..
„ Puncheons	84	128	40	30	..
„ Hogsheads	63	100	35	28	..
„ Barrels	42	77	32	25	..
„ Half Hogsheads	32	66	27	22	..

A TABLE OF MEASURES AND WEIGHTS.

	Gallons.	Cubic Inches.	Pounds.
A Ton of Water	252		
A Gallon, Beer Measure		282.	
„ New Standard		277.27	
„ Old Wine		231.	
	Ounces.		
A Cubic Foot of Water, Specific Gravity	1000		$62\frac{1}{2}$
Number of Gallons, as above stated, in a Cubic Foot. — Beer Measure	6.12		
Standard „	6.26		
Old Wine „	7.47		
		Cubic Feet.	
A Bushel of Pease		1.00	64
„ Oatmeal		.83	47
A Chord of Wood (Stowage)		128.	1700
A Chaldron of Coals		57.25	3024

The Weight of a Man and his Effects, is from Two to Two-and-a-Half Cwt.

THE DIMENSIONS AND WEIGHT
OF
MASTS, YARDS, ETC.

THE FIRST-RATE OF 120 GUNS.

- Lower Masts
  - Fore-mast
  - Main-mast
  - Mizen-mast
- Bowsprit
- Fore
  - Topmast
  - Top-gallant-mast
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Main
  - Topmast
  - Top-gallant-mast
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Mizen
  - Topmast
  - Top-gallant-mast
  - Cross-jack-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Driver-boom
- Driver-gaff
- Jib-boom
- Spritsail-yard
- Bowsprit-cap

Note.—The weight of the Spare Gear,

The situations of the Masts: Fore-mast $\frac{1}{8}$, Main-mast $\frac{2}{3}\frac{0}{6}$, and

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.
36	28	$36\frac{3}{4}$	14	14	0	24	23	3	4	15	18	0	0
39	32	40	18	13	1	14	29	1	14	20	2	3	0
27	8	$24\frac{1}{2}$	4	14	3	16	13	0	12	5	8	0	0
25	1	$36\frac{7}{8}$	10	1	1	0	22	1	0	11	3	2	0
20	34	$20\frac{5}{8}$	2	6	0	20	0	2	12	2	6	3	4
10	12	$10\frac{3}{4}$	0	6	1	0	.	.	.	0	6	1	0
30	13	$21\frac{1}{2}$	3	6	2	2	9	1	0	3	15	3	2
21	18	$13\frac{3}{4}$	0	19	3	8	1	0	12	1	0	3	20
14	8	$8\frac{5}{8}$	0	6	2	22	0	0	8	0	6	3	2
.	.	.	.	.	.	.	.	.	.	4	13	0	0
22	34	$20\frac{5}{8}$	2	10	2	6	0	2	17	2	11	0	23
11	17	$11\frac{5}{8}$	0	7	0	6	.	.	.	0	7	0	6
34	28	$24\frac{5}{8}$	4	13	0	24	9	3	7	5	3	0	3
24	20	$15\frac{1}{2}$	1	8	2	1	1	0	14	1	9	2	15
16	9	10	0	8	0	24	0	0	8	0	8	1	4
.	.	.	.	.	.	.	.	.	.	5	4	3	4
16	17	$13\frac{3}{4}$	0	17	2	22	0	0	18	0	17	3	12
8	8	$8\frac{5}{8}$	0	3	0	24	.	.	.	0	3	0	24
24	20	$15\frac{1}{2}$	1	7	2	1	0	0	26	1	7	2	27
16	12	$10\frac{1}{8}$	0	8	0	24	0	1	10	0	8	2	6
12	3	$6\frac{1}{2}$	0	2	1	22	0	0	6	0	2	2	0
.	.	.	.	.	.	.	.	.	.	2	1	3	0
23	7	$13\frac{3}{4}$	1	2	2	20	0	1	0	1	2	3	20
17	6	$12\frac{5}{8}$	0	12	2	0	1	0	2	0	13	2	2
17	18	$15\frac{1}{4}$	1	1	3	4	.	.	.	1	1	3	4
21	18	$13\frac{3}{4}$	0	19	3	8	0	0	10	0	19	3	18
.	.	.	.	.	.	.	.	.	.	0	8	2	0

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	16	11	3	18.

Mizen-mast $\frac{20}{24}$, of the Ship's Length on the Load-water-line.

THE 80-GUN SHIP.

- Lower Masts
  - Fore-mast
  - Main-mast
  - Mizen-mast
- Bowsprit
- Fore
  - Topmast
  - Top-gallant-mast
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard.
  - Tops, Caps, and Cross-trees
- Main
  - Topmast
  - Top-gallant-mast.
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard.
  - Tops, Caps, and Cross-trees
- Mizen
  - Topmast
  - Top-gallant-mast
  - Cross-jack-yard
  - Topsail-yard
  - Top-gallant-yard.
  - Tops, Caps, and Cross-trees
- Driver-boom
- Driver-gaff
- Jib-boom
- Spritsail-yard
- Bowsprit-cap

Note.—The Weight of the Spare Gear,

The situations of the Masts: Fore-mast $\frac{5}{6}$, Main-mast $\frac{3}{5}\frac{9}{8}$, and

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.
36	0	36	14	8	0	24	23	3	4	15	12	0	0
39	22	39¾	18	10	2	14	29	1	14	20	0	0	0
27	8	24¾	4	12	3	16	13	0	12	5	6	0	0
23	35	36	9	18	1	0	22	1	0	11	0	2	0
20	26	20¾	2	6	0	20	0	2	12	2	6	3	4
10	0	10	0	6	1	0	.	.	.	0	6	1	0
29	33	21½	3	6	2	2	9	1	0	3	15	3	2
21	20	13⅞	0	19	3	8	1	0	12	1	0	3	20
12	34	8	0	6	2	22	0	0	8	0	6	3	2
.	.	.	.	.	.	.	.	.	.	4	13	0	0
23	0	20¾	2	10	2	6	0	2	17	2	11	0	23
11	18	11⅜	0	7	0	6	.	.	.	0	7	0	6
34	15	24¾	4	13	0	24	9	3	7	5	3	0	3
24	27	16	1	8	2	1	1	0	14	1	9	2	15
15	12	9⅜	0	8	0	24	0	0	8	0	8	1	4
.	.	.	.	.	.	.	.	.	.	5	4	3	4
16	28	14	0	17	2	22	0	0	18	0	17	3	12
8	8	8½	0	3	0	24	.	.	.	0	3	0	24
24	27	16	1	7	2	1	0	0	26	1	7	2	27
16	12	10⅛	0	8	0	24	0	1	10	0	8	2	6
11	12	7	0	2	1	22	0	0	6	0	2	2	0
.	.	.	.	.	.	.	.	.	.	2	1	3	0
23	13½	13⅞	1	2	2	20	0	1	0	1	2	3	20
17	13	12	0	12	2	0	1	0	2	0	13	2	2
16	24	14½	1	1	3	4	.	.	.	1	1	3	4
21	20	13⅞	0	19	3	8	0	0	10	0	19	3	18
.	.	.	.	.	.	.	.	.	.	0	8	2	0

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	16	11	3	0.

Mizen-mast $\frac{2}{3}\frac{0}{4}$, of the Ship's Length on the Load-water-line.

THE 74-GUN SHIP.

- Lower Masts
  - Fore-mast
  - Main-mast
  - Mizen-mast
- Bowsprit
- Fore . . .
  - Topmast
  - Top-gallant-mast
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Main . . .
  - Topmast
  - Top-gallant-mast
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Mizen . . .
  - Topmast
  - Top-gallant-mast
  - Cross-jack-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Driver-boom
- Driver-gaff
- Jib-boom
- Spritsail-yard
- Bowsprit-cap

Note.—The Weight of the Spare Gear,

The situations of the Masts: Fore-mast $\frac{5}{39}$ to $\frac{5}{43}$, Main-mast $\frac{20}{35}$ to $\frac{20}{36}$, and

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.
32	30	31 1/4	9	1	1	26	22	2	2	10	4	0	0
36	0	36	12	18	0	8	27	3	20	14	6	0	0
24	23	21 5/8	3	3	0	0	13	0	0	3	16	0	0
22	0	34 1/8	7	7	0	0	21	0	0	8	8	0	0
19	8	19 1/4	2	1	2	12	0	2	10	2	2	0	22
9	22	9 5/8	0	4	3	12	.	.	.	0	4	3	12
28	4	19 5/8	2	6	2	22	9	0	6	2	15	3	0
20	18	12 3/4	0	14	1	4	1	0	10	0	15	1	14
13	12	8 1/2	0	3	3	20	0	0	8	0	4	0	0
.	.	. .	.	.	.	.	.	.	.	2	17	0	20
21	22	19 1/4	2	6	2	10	0	2	16	2	6	0	26
11	0	11	0	8	3	12	.	.	.	0	8	3	12
32	8	22 5/8	3	14	2	26	9	2	8	4	4	1	6
23	18	14 5/8	1	1	2	22	1	0	12	1	2	3	6
15	10	9 1/4	0	5	2	24	0	0	8	0	5	3	4
.	.	. .	.	.	.	.	.	.	.	3	2	0	20
15	32	13	0	15	2	22	0	0	18	0	15	3	12
8	0	8	0	2	3	22	.	.	.	0	2	3	22
23	18	14 5/8	1	1	2	22	0	0	26	1	1	3	20
15	13	9 5/8	0	5	2	24	0	1	10	0	6	0	6
10	21	6 1/8	0	2	0	18	0	0	4	0	2	0	22
.	.	. .	.	.	.	.	.	.	.	1	3	1	15
22	27	12 3/4	0	17	0	6	0	1	0	0	17	1	6
16	35	11 5/8	0	12	0	0	1	0	2	0	13	0	2
16	0	14 1/8	0	17	0	6	.	.	.	0	17	0	6
20	18	12 3/4	0	14	1	4	0	0	26	0	14	2	2
.	.	. .	.	.	.	.	.	.	.	0	8	0	6

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	12	12	0	27.

Mizen-mast $\frac{1}{23}$ to $\frac{1}{24}$, of the Ship's Length on the Load-water-line.

THE 46-GUN FRIGATE.

Lower Masts	Fore-mast
	Main-mast
	Mizen-mast
Bowsprit	
Fore	Topmast
	Top-gallant-mast
	Lower-yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
Main	Topmast
	Top-gallant-mast
	Lower yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
Mizen	Topmast
	Top-gallant-mast
	Cross-jack-yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
	Driver-boom
	Driver-gaff
	Jib-boom
	Spritsail-yard
	Bowsprit-cap

Note.—The Weight of the Spare Gear,
The situations of the Masts: Fore-mast $\frac{5}{38}$, Main-mast $\frac{20}{35}$, and

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.
27	18	25	5	11	1	0	13	2	0	6	4	3	0
30	0	28	7	2	2	0	16	1	0	7	18	3	0
21	25	19	2	5	2	21	3	3	7	2	9	2	0
18	6	$26\frac{1}{2}$	4	8	3	0	11	0	0	4	19	3	0
15	34	$16\frac{1}{6}$	1	3	3	20	0	1	20	1	4	1	12
7	29	$7\frac{3}{4}$	0	3	0	24	.	.	.	0	3	0	24
23	29	$16\frac{3}{6}$	1	13	2	26	2	3	0	1	16	1	26
17	28	$11\frac{1}{2}$	0	12	2	6	0	2	26	0	13	1	4
10	35	$6\frac{3}{4}$	0	2	0	20	0	0	6	0	2	0	26
.	.	.	.	.	.	.	.	.	.	2	1	0	25
18	0	$16\frac{1}{8}$	1	7	2	0	0	2	0	1	8	0	0
9	0	9	0	4	2	4	.	.	.	0	4	2	4
27	9	$18\frac{7}{8}$	2	7	2	10	2	3	14	2	10	1	24
19	24	$12\frac{1}{4}$	0	13	3	20	0	3	0	0	14	2	20
12	18	$7\frac{1}{4}$	0	3	2	22	0	0	6	0	3	3	0
.	.	.	.	.	.	.	.	.	.	2	4	1	9
13	24	$11\frac{7}{8}$	0	9	0	26	0	0	10	0	9	1	8
6	30	$6\frac{7}{8}$	0	2	0	0	.	.	.	0	2	0	0
19	24	$12\frac{1}{4}$	0	13	2	20	0	0	20	0	13	3	12
13	20	$8\frac{1}{4}$	0	4	1	4	0	0	26	0	4	2	2
9	12	$5\frac{1}{2}$	0	1	3	0	0	0	4	0	1	3	4
.	.	.	.	.	.	.	.	.	.	1	1	3	16
18	21	$11\frac{1}{2}$	0	15	1	12	0	0	10	0	15	1	22
13	0	$9\frac{3}{8}$	0	9	1	4	0	2	0	0	9	3	4
13	5	$11\frac{3}{4}$	0	10	1	2	.	.	.	0	10	1	2
17	28	$11\frac{1}{2}$	0	12	1	6	0	0	20	0	12	1	26
.	.	.	.	.	.	.	.	.	.	0	4	3	10

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	7	10	2	26.

Mizen-mast $\frac{20}{23}$, of the Ship's Length on the Load-water-line.

THE RAZEE-CORVETTE OF 26 GUNS.

Lower Masts	Fore-mast
	Main-mast
	Mizen-mast
Bowsprit	
Fore	Topmast
	Top-gallant-mast
	Lower-yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
Main	Topmast
	Top-gallant-mast
	Lower-yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
Mizen	Topmast
	Top-gallant-mast
	Cross-jack-yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
	Driver-boom
	Driver-gaff
	Jib-boom
	Spritsail-yard
	Bowsprit-cap

Note.—The weight of the Spare Gear,

The situations of the Masts: Fore-mast $\frac{5}{42}$, Main-mast $\frac{20}{33}$, and

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.
26	34	25 5/8	5	9	1	0	13	2	0	6	2	3	0
29	12	28	7	0	0	0	16	1	0	7	16	1	0
20	25	19 1/2	2	4	2	3	3	3	7	2	8	1	10
18	4	26 1/2	4	6	3	0	11	0	0	4	17	3	0
15	10	16 1/8	1	3	3	20	0	1	20	1	4	1	12
7	33	7 1/6	0	3	0	24	.	.	.	0	3	0	24
23	19	16 1/4	1	13	2	26	2	3	0	1	16	1	26
17	20.	11	0	12	2	6	0	2	26	0	13	1	4
10	24	6 3/8	0	2	0	20	0	0	6	0	2	0	26
.	.	. .	.	.	.	.	.	.	.	2	1	0	25
18	0	16 1/8	1	7	2	0	0	2	0	1	8	0	0
9	0	9	0	4	2	4	.	.	.	0	4	2	4
26	34	18 5/8	2	7	2	10	2	3	14	2	10	1	24
19	24	12 1/4	0	13	3	20	0	3	0	0	14	2	20
12	18	7 1/2	0	3	2	22	0	0	6	0	3	3	0
.	.	. .	.	.	.	.	.	.	.	2	4	1	9
13	18	11 1/4	0	9	0	26	0	0	10	0	9	1	8
6	27	6 3/4	0	2	0	0	.	.	.	0	2	0	0
19	24	6 3/4	0	13	2	20	0	0	20	0	13	3	12
13	12	8	0	4	1	4	0	0	26	0	4	2	2
9	12	5 1/4	0	1	3	0	0	0	4	0	1	3	4
.	.	. .	.	.	.	.	.	.	.	1	1	3	16
19	12	13 1/8	0	15	1	12	0	0	10	0	15	1	22
13	22	9 3/4	0	9	1	4	0	2	0	0	9	3	4
13	1	11 5/8	0	10	1	2	.	.	.	0	10	1	2
17	20	11	0	12	1	6	0	0	20	0	12	1	26
.	.	. .	.	.	.	.	.	.	.	0	4	3	10

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	7	10	0	0.

Mizen-mast $\frac{10}{24}$, of the Ship's Length on the Load-water-line.

THE 28-GUN SHIP AND 18-GUN CORVETTE.

- Lower Masts
  - Fore-mast
  - Main-mast
  - Mizen-mast
- Bowsprit
- Fore . . .
  - Topmast
  - Top-gallant-mast
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Main . .
  - Topmast
  - Top-gallant-mast
  - Lower-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Mizen . .
  - Topmast
  - Top-gallant-mast
  - Cross-jack-yard
  - Topsail-yard
  - Top-gallant-yard
  - Tops, Caps, and Cross-trees
- Driver-boom
- Driver-gaff
- Jib-boom
- Spritsail-yard
- Bowsprit-cap

Note.—The Weight of the Spare Gear,

The situations of the Masts of the 28-Gun Ship: Fore-mast $\frac{5}{3\,9}$, Main-mast $\frac{2\,0}{3\,5}$, and mast $\frac{2\,0}{2\,3}$, of the Ship's Length

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.
21	18	19	2	2	2	8	6	3	20	2	9	2	0
23	24	20½	2	14	1	14	7	2	4	3	2	0	0
18	0	16¼	1	7	1	0	2	1	0	1	9	2	0
14	31	21⅛	2	0	0	21	0	3	7	2	1	0	0
12	26	12¾	0	10	3	6	0	1	1	0	11	0	7
6	13	6⅜	0	1	1	20	.	.	.	0	1	1	20
18	12	12⅝	0	13	2	0	1	3	6	0	15	1	6
13	24	8½	0	4	0	12	0	1	10	0	4	1	22
8	12	5½	0	1	2	20	0	0	6	0	1	2	26
.	.	.	.	.	.	.	.	.	.	0	19	1	11
14	14	12¾	0	12	0	26	0	1	4	0	12	2	2
7	7	7⅛	0	2	0	16	.	.	.	0	2	0	16
21	0	14½	0	19	2	6	2	0	2	1	1	2	8
15	18	9¾	0	6	0	8	0	1	12	0	6	1	20
9	16	6	0	1	3	2	0	0	6	0	1	3	8
.	.	.	.	.	.	.	.	.	.	1	3	3	5
10	29	9	0	5	0	10	0	0	10	0	5	0	20
5	16	5½	0	1	1	0	.	.	.	0	1	1	0
15	18	9¾	0	6	0	8	0	0	14	0	6	0	22
10	12	5⅞	0	1	3	2	0	0	20	0	1	3	22
7	4	4½	0	0	2	24	0	0	3	0	0	2	27
.	.	.	.	.	.	.	.	.	.	0	13	1	22
14	23	8½	0	8	0	0	0	1	0	0	8	1	0
10	30	7¾	0	4	0	12	0	1	8	0	4	1	20
11	0	8⅞	0	5	0	0	.	.	.	0	5	0	0
13	24	8½	0	4	0	12	0	0	14	0	4	0	26
.	.	.	.	.	.	.	.	.	.	0	2	2	4

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	4	2	0	0.

Mizen-mast $\frac{20}{23}$; and of the Corvette, the Fore-mast $\frac{5}{43}$, Main-mast $\frac{20}{36}$, and Mizen-on the Load-water-line.

THE 18-GUN BRIG.

Lower Masts	Fore-mast
	Main-mast
Bowsprit	
Fore	Topmast
	Top-gallant-mast
	Lower-yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
Main	Topmast
	Top-gallant-mast
	Lower-yard
	Topsail-yard
	Top-gallant-yard
	Tops, Caps, and Cross-trees
	Driver-boom
	Driver-gaff
	Jib-boom
	Spritsail-yard
	Bowsprit-cap

Note.—The Weight of the Spare Gear,
The situations of the Masts: Fore-mast $\frac{1}{9}$, Main-mast $\frac{2}{3}$,

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.
19	33	20	2	6	3	0	6	3	0	2	13	2	0
22	27	$21\frac{3}{8}$	2	19	1	0	3	1	0	3	2	2	0
14	16	20	1	12	3	21	0	3	7	1	13	3	0
12	6	$12\frac{1}{4}$	0	10	1	2	0	1	4	0	10	2	6
8	22	$7\frac{1}{8}$	0	2	2	8	.	.	.	0	2	2	8
18	6	$11\frac{3}{8}$	0	10	1	12	2	0	2	0	12	1	14
14	0	$8\frac{1}{2}$	0	4	1	4	0	1	12	0	4	2	16
9	6	6	0	1	1	10	0	0	6	0	1	1	16
.	.	.	.	.	.	.	.	.	.	1	0	1	3
12	35	$12\frac{1}{4}$	0	10	3	16	0	1	4	0	11	0	20
8	22	$7\frac{1}{8}$	0	2	2	8	.	.	.	0	2	2	8
18	7	$11\frac{3}{8}$	0	10	1	12	2	0	2	0	12	1	14
14	0	$8\frac{1}{2}$	0	4	1	4	0	1	12	0	4	2	16
9	6	6	0	1	1	10	0	0	6	0	1	1	16
.	.	.	.	.	.	.	.	.	.	1	3	1	4
19	12	$13\frac{1}{2}$	0	18	3	22	0	0	15	0	19	0	9
11	12	$9\frac{3}{8}$	0	5	1	12	0	1	8	0	5	2	20
9	0	$8\frac{1}{2}$	0	3	2	16	.	.	.	0	3	2	16
14	0	$8\frac{1}{2}$	0	4	1	4	0	0	14	0	4	1	18
.	.	.	.	.	.	.	.	.	.	0	2	3	10

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	3	0	2	19.

of the Vessel's Length on the Load-water-line.

THE 10-GUN BRIG.

Lower Masts { Fore-mast . . . . . Main-mast . . . . .

Bowsprit . . . . . .

Fore . . { Topmast . . . . . Top-gallant-mast . . . . . Lower-yard . . . . . Topsail-yard . . . . . Top-gallant-yard . . . . . Tops, Caps, and Cross-trees . . . . .

Main . . { Topmast . . . . . Top-gallant-mast . . . . . Lower-yard . . . . . Topsail-yard . . . . . Top-gallant-yard . . . . . Tops, Caps, and Cross-trees . . . . .

Driver-boom . . . . . Driver-gaff . . . . . Jib-boom . . . . . Spritsail-yard . . . . . Bowsprit-cap . . . . .

Note.—The weight of the Spare Gear,

The situations of the Masts: Fore-mast $\frac{5}{29}$, and Main-mast $\frac{20}{31}$,

DIMENSIONS.			WEIGHT OF THE MASTS AND YARDS.											
Length.		Diameter.	Wood.				Iron.			Total.				
Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.	Cwt.	Qrs.	lbs.	Tons.	Cwt.	Qrs.	lbs.	
15	18	16	1	3	1	18	3	2	10	1	7	0	0	
18	6	17¾	1	14	3	0	2	3	0	1	17	2	0	
12	0	17	1	0	1	0	0	3	0	1	1	0	0	
10	12	10	0	7	2	8	0	1	2	0	7	3	10	
6	18	6	0	1	2	20	.	.	.	0	1	2	20	
16	0	11	0	9	2	20	1	3	0	0	11	1	20	
12	18	8	0	4	1	0	0	1	12	0	4	2	12	
8	24	6	0	1	1	20	0	0	6	0	1	1	26	
.	.	. .	.	.	.	.	.	.	.	0	18	0	7	
10	12	10	0	7	2	8	0	1	2	0	7	3	10	
6	18	6	0	1	2	20	.	.	.	0	1	2	20	
16	11	11	0	9	2	20	1	3	0	0	11	1	20	
12	18	8	0	4	1	0	0	1	12	0	4	2	12	
8	24	6	0	1	1	20	0	0	6	0	1	1	26	
.	.	. .	.	.	.	.	.	.	.	0	19	0	6	
16	32	11	0	10	0	20	0	3	0	0	10	3	20	
10	4	7½	0	2	2	20	0	1	2	0	2	3	22	
9	0	8	0	3	0	24	.	.	.	0	3	0	24	
12	18	8	0	4	1	0	0	0	10	0	4	1	10	
.	.	. .	.	.	.	.	.	.	.	0	2	2	1	

	Tons.	Cwt.	Qrs.	lbs.
Booms, &c.	2	4	3	12.

of the Vessel's Length on the Load-water-line.

THE SCHOONER OF 183 TONS.		DIMENSIONS AND WEIGHT.						
		Length.		Diameter.	Weight.			
		Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.
Lower Masts	Fore-mast	22	18	$18\frac{7}{8}$	2	10	0	0
	Main-mast	24	18	$17\frac{3}{4}$	2	12	0	0
	Bowsprit	10	16	$18\frac{1}{2}$	1	6	0	0
	Jib-boom	9	0	$8\frac{1}{8}$	0	3	0	0
Fore	Topmast, to the Hounds	7	30	$9\frac{1}{4}$	0	3	0	6
	Topmast Pole	3	32					
	Lower-yard	18	12	$10\frac{1}{2}$	0	9	3	0
	Topsail-yard	11	6	$7\frac{1}{4}$	0	2	2	0
	Top-gallant-yard	7	6	$4\frac{1}{4}$	0	0	3	0
	Gaff	8	26	$6\frac{1}{8}$	0	2	1	0
Main	Topmast, to the Hounds	8	18	$7\frac{1}{4}$	0	2	3	8
	Topmast Pole	2	3					
	Boom	17	18	$12\frac{1}{4}$	0	11	3	8
	Gaff	9	0	$6\frac{3}{4}$	0	2	2	0

	Tons.	Cwt.	Qrs.	lbs.
The Weight of the Spare Gear, Booms, &c.	1	3	0	0

The situations of the Masts: Fore-mast $\frac{1}{5}$, and Main-mast $\frac{20}{31}$, of the Length of the Vessel, on the Load-water-line.

THE CUTTER OF 161 TONS.	DIMENSIONS AND WEIGHT.							
	Length.		Diameter.	Weight.			
	Yards.	Inches.	Inches.	Tons.	Cwt.	Qrs.	lbs.
Main-mast	25	20	20	2	18	2	0
Bowsprit	19	3	16	1	15	2	0
Boom	20	14	$12\frac{3}{4}$	0	15	2	0
Topmast	18	13	10	0	8	3	0
Gaff	14	12	$8\frac{3}{4}$	0	4	0	2
Trysail-gaff	7	27	$8\frac{1}{4}$	0	1	3	8
Topsail-yard	13	16	$6\frac{1}{2}$	0	1	2	12
Cross-Jack-yard	20	0	$9\frac{1}{2}$	0	5	2	0

	Tons.	Cwt.	Qrs.	lbs.
Total Weight of the Masts, Yards, and Spare Gear	8	1	2	0.

The situation of the Mast $\frac{10}{25}$ of the Length of the Vessel, on the Load-water-line.

THE DIMENSIONS

AND

AREA OF THE PRINCIPAL SAILS, ETC.

THE DIMENSIONS AND AREA

Sails.	First Rate.			
	Head.	Foot.	Depth.	Area.
	Ft. In.	Ft. In.	Ft. In.	Feet.
Jib	. .	52 6	81 6	2132
Fore Course	81 0	78 6	40 0	3210
Topsail	51 6	82 0	53 6	3577
Top-gallant-sail	38 6	54 9	28 8	1334
Main Course	93 10	97 0	45 6	4305
Topsail	60 9	96 0	60 9	4740
Top-gallant-sail	43 8	63 6	32 6	1761
Mizen Topsail	41 9	63 6	43 6	2300
Top-gallant-sail	32 6	43 2	22 0	836
Driver	47 0	62 6	32 6 63 6	2457
Total Area of Sails, in Feet	. .	. .	. .	26652

OF THE PRINCIPAL SAILS.

80								74								Razee, 50							
Head.		Foot.		Depth.		Area.		Head.		Foot.		Depth.		Area.		Head.		Foot.		Depth.		Area.	
Ft.	In.	Ft.	In.	Ft.	In.	Feet.		Ft.	In.	Ft.	In.	Ft.	In.	Feet.		Ft.	In.	Ft.	In.	Ft.	In.	Feet.	
.	.	51	0	78	0	1989		.	.	50	0	78	0	1950		.	.	50	0	82	0	2100	
80	0	77	0	45	0	3537		75	0	71	0	42	9	3120		75	0	71	0	50	0	3654	
51	2	82	0	54	3	3600		50	3	77	6	50	6	3221		50	3	77	6	50	6	3221	
34	8	54	9	27	0	1205		35	9	51	3	26	4	1144		35	9	51	3	26	4	1144	
92	9	96	7	52	0	4914		86	0	90	6	48	9	4300		86	0	90	6	56	0	4928	
60	9	94	10	60	6	4704		57	6	87	6	57	3	4140		57	6	87	6	57	3	4140	
40	1	63	6	32	6	1682		40	3	59	0	30	0	1469		40	3	59	0	30	0	1469	
41	9	63	6	44	0	2314		38	6	57	6	41	0	1962		38	6	57	6	41	0	1962	
30	3	43	2	22	0	806		27	6	40	0	22	0	737		27	6	40	0	22	0	737	
47	0	62	6	36	0	} 2825		45	0	60	0	32	0	} 2243		45	0	60	0	36	6	} 2421	
				63	6							54	0							58	6		
.	.	.	.	.	.	27576		.	.	.	.	.	.	24286		.	.	.	.	.	.	25776	

THE DIMENSIONS AND AREA

Sails.	52-Gun Frigate.			
	Head.	Foot.	Depth.	Area.
	Ft. In.	Ft. In.	Ft. In.	Feet.
Jib	. .	50 0	74 0	1850
Fore Course	75 0	71 0	41 0	2993
Topsail	50 3	77 6	50 6	3221
Top-gallant-sail	35 9	51 3	26 4	1144
Main-Course	86 0	90 6	45 0	3971
Topsail	57 6	87 6	57 3	4140
Top-gallant-sail	40 3	59 0	30 0	1469
Mizen Topsail	38 6	57 6	41 0	1962
Top-gallant-sail	27 6	40 0	22 0	737
Driver	45 0	60 0	32 0 54 0	2243
Total Area of Sails, in Feet	. .	. .	. .	23730

OF THE PRINCIPAL SAILS.

46								Razee Corvette, 26 Guns.								28-Gun Ship.							
Head.		Foot.		Depth.		Area.		Head.		Foot.		Depth.		Area.		Head.		Foot.		Depth.		Area.	
Ft.	In.	Ft.	In.	Ft.	In.	Feet.		Ft.	In.	Ft.	In.	Ft.	In.	Feet.		Ft.	In.	Ft.	In.	Ft.	In.	Feet.	
.	.	41	0	62	0	1280		.	.	40	0	64	0	1248		.	.	32	0	52	0	845	
64	0	62	0	39	0	2457		63	0	62	0	35	6	2225		49	0	47	6	31	0	1500	
42	6	65	6	42	6	2241		42	0	65	0	41	0	2193		32	6	50	0	33	6	1383	
28	0	44	0	20	6	738		28	0	44	0	20	6	738		22	0	34	6	17	6	495	
73	0	76	10	41	0	3075		72	6	76	0	42	3	3142		55	8	60	0	34	0	1972	
46	6	74	6	47	0	2790		46	6	74	0	45	6	2743		36	6	56	9	36	0	1674	
33	0	49	0	23	6	972		33	0	49	0	23	6	972		25	0	39	0	19	6	624	
34	0	49	0	33	0	1369		34	0	49	0	33	0	1369		25	0	38	0	23	0	724	
25	6	36	0	18	0	549		25	0	36	0	18	0	549		18	6	27	0	14	6	328	
36	0	51	0	31	0	} 1783		35	0	53	0	28	0	} 1694		30	0	39	0	25	0	} 1068	
				51	0							49	0							41	6		
.	.	.	.	.	.	17254		.	.	.	.	.	.	16873		.	.	.	.	.	.	10611	

THE DIMENSIONS AND AREA

Sails.	18-Gun Corvette.			
	Head.	Foot.	Depth.	Area.
	Ft. In.	Ft. In.	Ft. In.	Feet.
Jib	. .	34 6	51 0	879
Fore Course	49 0	47 6	31 0	1500
Topsail	32 6	50 0	33 6	1383
Top-gallant-sail	22 0	34 6	17 6	495
Staysail	. .	. .	. .	. . .
Main Course	55 8	60 0	36 0	2082
Topsail	36 6	56 9	36 0	1674
Top-gallant-sail	25 0	39 0	19 6	624
Gaff Topsail	. .	. .	. .	. . .
Mizen Topsail	25 0	38 0	23 0	724
Top-gallant-sail	18 6	27 0	14 6	328
Driver	29 6	39 0	27 9 45 0	1242
Total Area of Sails, in Feet	. .	. .	. .	10931

OF THE PRINCIPAL SAILS.

18-Gun Brig.				10-Gun Brig.				Schooner.			
Head.	Foot.	Depth.	Area.	Head.	Foot.	Depth.	Area.	Head.	Foot.	Depth.	Area.
Ft. In.	Ft. In.	Ft. In.	Feet.	Ft. In.	Ft. In.	Ft. In.	Feet.	Ft. In.	Ft. In.	Ft. In.	Feet.
. .	30 0	45 0	675	. .	27 0	39 6	560	. .	23 0	38 6	592
								Gaff-	Fore	Sail.	
47 6	46 0	28 0	1316	42 8	40 9	22 0	916	24 0	37 0	39 0	1525
										53 0	
33 0	49 0	31 0	1272	28 6	43 6	27 0	962	24 0	50 0	26 0	962
23 6	36 0	24 0	714	23 0	30 6	18 0	478	20 0	30 0	10 0	250
. .	. .	. .	. . .	. .	. .	. .	. . .	. .	30 0	37 0	690
48 0	56 0	36 6	1716	42 8	50 0	28 0	1288	. .	. .	. .	. . .
33 0	49 6	33 0	1355	28 6	43 6	27 0	962	. .	. .	. .	. . .
23 6	36 0	24 0	714	23 0	30 6	18 0	478	. .	. .	. .	. . .
. .	. .	. .	. . .	. .	. .	. .	. . .	7 0	28 0	35 0	498
										22 0	
. .	. .	. .	. . .	. .	. .	. .	. . .	. .	. .	. .	. . .
. .	. .	. .	. . .	. .	. .	. .	. . .	. .	. .	. .	. . .
											Main-Sail.
30 0	49 0	32 0	1619	28 0	47 0	23 0	1200	25 6	50 0	43 6	1982
		50 0				41 0				59 6	
. .	. .	. .	9381	. .	. .	. .	6844	. .	. .	. .	6499

THE AREA,

AND THE

CENTRE OF EFFORT OF THE SAILS.

THE FIRST-RATE OF 120 GUNS.

Sails.	Area of Sails.	Centre of Effort.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	2132	73 0	135 0	. . .
Fore Course	3210	52 0	76 6	. . .
Topsail	3577	98 0	77 3	. . .
Top-gallant-sail	1334	141 0	77 9	. . .
Main Course	4305	53 6	. . .	11 0
Topsail	4740	104 6	. . .	11 6
Top-gallant-sail	1761	152 0	. . .	12 6
Mizen Topsail	2300	92 6	. . .	70 6
Top-gallant-sail	836	126 6	. . .	71 6
Driver	2457	60 6	. . .	102 3
Total Area of Sails	26652	. . .	. . .	. . .

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	11	$9\frac{5}{8}$
Ditto above the Load-water-line	87	$1\frac{1}{4}$
Load Draught of Water . . . . . Forward	24	7
Aft	26	0

Vide Plate XIV.

THE 80-GUN SHIP.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	1989	73 0	131 0	. . .
Fore Course	3537	50 6	73 0	. . .
Topsail	3600	98 0	73 0	. . .
Top-gallant-sail	1205	141 0	73 0	. . .
Main Course	4914	50 6	. . .	12 0
Topsail	4704	105 6	. . .	13 0
Top-gallant-sail	1682	153 0	. . .	14 0
Mizen Topsail	2314	92 6	. . .	65 6
Top-gallant-sail	806	126 6	. . .	67 0
Driver	2825	53 0	. . .	95 0
Total Area of Sails	27576	. . .	. . .	. . .

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	9	$1\frac{5}{8}$
Ditto above the Load-water-line	83	$10\frac{7}{8}$
Load Draught of Water . . . . . Forward	21	9
Aft	25	0

Vide Plate XV.

THE 74-GUN SHIP.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	1950	67 0	118 0	. . .
Fore Course	3120	45 9	67 2	. . .
Topsail	3221	91 6	67 2	. . .
Top-gallant-sail	1144	131 0	67 2	. . .
Main Course	4300	47 6	. . .	12 0
Topsail	4140	99 6	. . .	12 4
Top-gallant-sail	1469	143 0	. . .	12 8
Mizen Topsail	1962	84 6	. . .	65 0
Top-gallant-sail	737	116 4	. . .	65 9
Driver	2243	49 0	. . .	94 6
Total Area of Sails	24286	. . .	. . .	. . .

	Feet. In.
The Centre of Effort of the Sails, afore the Centre of Flotation	9 $7\frac{1}{4}$
Ditto above the Load-water-line	78 $5\frac{1}{2}$
Load Draught of Water . . . . . Forward	20 11
Aft	23 9

Vide Plate XVI.

THE RAZEE 80-GUN SHIP.

Sails.	Area of Sails.	CENTRE OF EFFORT.					
		Above the Load-line.		From the Centre of Flotation.			
				Afore.		Abaft.	
	Feet.	Feet.	In.	Feet.	In.	Feet.	In.
Jib	2100	65	0	120	0	. . .	
Fore-Course	3654	45	0	67	2	. . .	
Topsail	3221	93	0	67	2	. . .	
Top-gallant-sail	1144	132	6	67	2	. . .	
Main-Course	4928	47	0	. . .		12	0
Topsail	4140	102	0	. . .		12	4
Top-gallant-sail	1469	145	0	. . .		12	8
Mizen Topsail	1962	83	0	. . .		65	0
Top-gallant-sail	737	116	0	. . .		65	4
Driver	2421	44	0	. . .		92	0
Total Area of Sails	25776	. . .		. . .		. . .	

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	10	$2\frac{1}{8}$
Ditto above the Load-water-line	76	$6\frac{7}{8}$
Load Draught of Water . . . . . Forward	20	3
Aft	21	6

Vide Plate XVII.

THE 52-GUN FRIGATE.

Sails.	Area of Sails.	Centre of Effort.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	1850	58 0	117 0	. . .
Fore Course	2993	39 9	65 0	. . .
Topsail	3221	85 0	65 0	. . .
Top-gallant-sail	1144	125 0	66 0	. . .
Main Course	3971	40 0	. . .	11 0
Topsail	4140	90 0	. . .	11 6
Top-gallant-sail	1469	133 6	. . .	12 0
Mizen Topsail	1962	74 6	. . .	62 0
Top-gallant-sail	737	106 4	. . .	63 0
Driver	2243	40 6	. .	90 3
Total Area of Sails	23730	. . .	. . .	. . .

	Feet. In.
The Centre of Effort of the Sails, afore the Centre of Flotation	9 0
Ditto above the Load-water-line	71 $0\frac{3}{8}$
Load Draught of Water . . . . . Forward	19 5
Aft	20 5

Vide Plate XVIII.

THE 46-GUN FRIGATE.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	1280	48 6	103 0	. . .
Fore Course	2457	37 6	56 0	. . .
Topsail	2241	76 4	56 0	. . .
Top-gallant-sail	738	108 9	56 3	. . .
Main Course	3075	37 6	. . .	10 0
Topsail	2790	81 8	. . .	10 3
Top-gallant-sail	972	118 3	. . .	10 6
Mizen Topsail	1369	68 9	. . .	55 0
Top-gallant-sail	549	96 9	. . .	55 9
Driver	1783	38 0	. . .	67 6
Total Area of Sails	17254	. . .	. . .	. . .

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	8	$1\frac{1}{4}$
Ditto above the Load-water-line	62	6
Load Draught of Water . . . . . Forward	17	6
Load Draught of Water . . . . . Aft	19	2

Vide Plate XIX.

THE RAZEE CORVETTE, 26 GUNS.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	1248	45 4	99 9	. . .
Fore Course	2225	35 6	54 9	. . .
Topsail	2193	72 6	54 6	. . .
Top-gallant-sail	738	104 0	54 0	. . .
Main Course	3142	35 0	. . .	10 0
Topsail	2743	77 3	. . .	11 0
Top-gallant-sail	972	113 0	. . .	12 0
Mizen Topsail	1369	65 0	. . .	54 0
Top-gallant-sail	549	93 0	. . .	55 3
Driver	1694	35 0	. . .	76 0
Total Area of Sails	16873	. . .	. . .	. . .

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	5	$3\frac{1}{2}$
Ditto above the Load-water-line	59	$9\frac{1}{8}$
Load Draught of Water — Forward	17	$0\frac{1}{2}$
Load Draught of Water — Aft	18	$5\frac{1}{2}$

Vide Plate XX.

THE 28-GUN SHIP.

Sails.	Area of Sails.	Centre of Effort.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	845	40 0	78 6	. . .
Fore Course	1500	29 0	43 0	. . .
Topsail	1383	60 3	43 0	. . .
Top-gallant-sail	495	87 0	43 0	. . .
Main Course	1972	31 6	. . .	7 0
Topsail	1674	65 3	. . .	7 3
Top-gallant-sail	624	96 0	. . .	7 3
Mizen Topsail	724	56 0	. . .	41 0
Top-gallant-sail	329	78 6	. . .	41 6
Driver	1065	32 0	. . .	55 6
Total Area of Sails	10611	. . .	. . .	. . .

		Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation		7	$4\frac{1}{4}$
Ditto	above the Load-water-line	50	$5\frac{3}{8}$
Load Draught of Water	Forward	15	2
	Aft	15	7

Vide Plate XXI.

THE 18-GUN CORVETTE.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	879	34 6	80 0	. . .
Fore Course	1500	29 0	43 0	. . .
Topsail	1383	60 3	43 0	. . .
Top-gallant-sail	495	87 0	43 0	. . .
Main Course	2082	30 6	. . . .	6 6
Topsail	1674	65 3	. . . .	7 6
Top-gallant-sail	624	96 0	. . .	8 6
Mizen Topsail	724	56 0	. . . . .	41 6
Top-gallant-sail	328	78 6	. . .	43 0
Driver	1242	26 6	. . . .	59 0
Total Area of Sails	10931	. . .	. . .	. . .

		Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation		6	1
Ditto	above the Load-water-line	48	$7\frac{3}{8}$
Load Draught of Water	Forward	14	8
	Aft	15	3

Vide Plate XXII.

THE 18-GUN BRIG.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	675	34 0	63 0	. . .
Fore Course	1316	25 3	32 3	. . .
Topsail	1272	55 6	32 3	. . .
Top-gallant-sail	714	83 0	32 6	. . .
Main Course	1716	28 6	. . .	16 0
Topsail	1355	63 3	. . .	17 0
Top-gallant-sail	714	92 9	. . .	18 0
Driver	1619	30 0	. . .	39 6
Total Area of Sails	9381	. . .	. . .	. . .

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	2	4
Ditto above the Load-water-line	46	3¼
Load Draught of Water . . . . . Forward	11	4
Load Draught of Water . . . . . Aft	14	7

Vide Plate XXIII.

THE 10-GUN BRIG.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	560	28 0	60 0	. . .
Fore Course	916	19 0	28 0	. . .
Topsail	962	42 6	28 0	. . .
Top-gallant-sail	478	66 0	28 0	. . .
Main Course	1288	21 3	. . .	13 0
Topsail	962	48 9	. . .	14 3
Top-gallant-sail	478	72 0	. . .	15 0
Driver	1200	23 0	. . .	32 0
Total Area of Sails	6844	. . .	. . .	. . .

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	3	$3\frac{3}{8}$
Ditto above the Load-water-line	35	$4\frac{1}{4}$
Load Draught of Water . . . . . Forward	11	5
Load Draught of Water . . . . . Aft	12	6

Vide Plate XXIV.

THE SCHOONER OF 183 TONS.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	592	21 0	57 0	. . .
Fore Staysail	690	22 0	34 6	. . .
Topsail	962	61 0	20 0	. . .
Top-gallant-sail	250	79 0	19 0	. . .
Sail-gaff	1525	31 0	7 0	. . .
Mainsail	1982	31 6	. . .	34 6
Gaff-topsail	498	71 0	. . .	27 6
Total Area of Sails	6499	. . .	. . .	. . .

	Feet.	In.
The Centre of Effort of the Sails, afore the Centre of Flotation	0	9
Ditto above the Load-water-line	38	5¾
Load Draught of Water . . . . . Forward	9	2
Load Draught of Water . . . . . Aft	11	8

Vide Plate XXV.

THE CUTTER OF 181 TONS.

Sails.	Area of Sails.	CENTRE OF EFFORT.		
		Above the Load-line.	From the Centre of Flotation.	
			Afore.	Abaft.
	Feet.	Feet. In.	Feet. In.	Feet. In.
Jib	1001	25 9	38 3	. . .
Fore-sail	598	23 6	17 3	. . .
Main-sail	1708	34 0	. . .	23 0
Gaff-topsail	1014	74 3	. . .	11 6
Total Area of Sails	4321	. . .	. . .	. . .

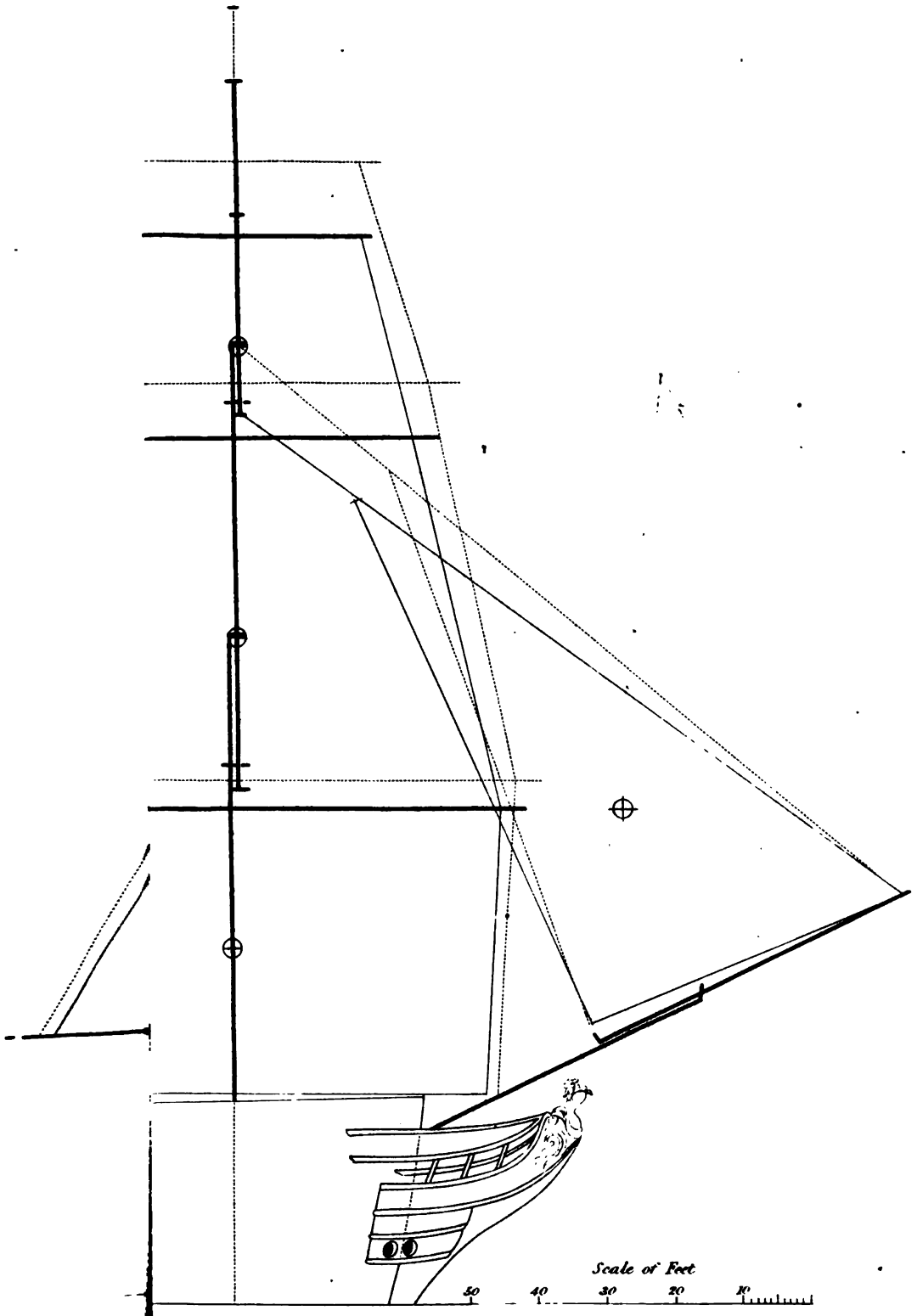
	Feet. In.
The Centre of Effort of the Sails, *abaft* the Centre of Flotation	0 $4\frac{1}{8}$
Ditto above the Load-water-line	40 $0\frac{7}{8}$

The above are with the Sails stated, and the following are with the Gaff-topsail taken in.

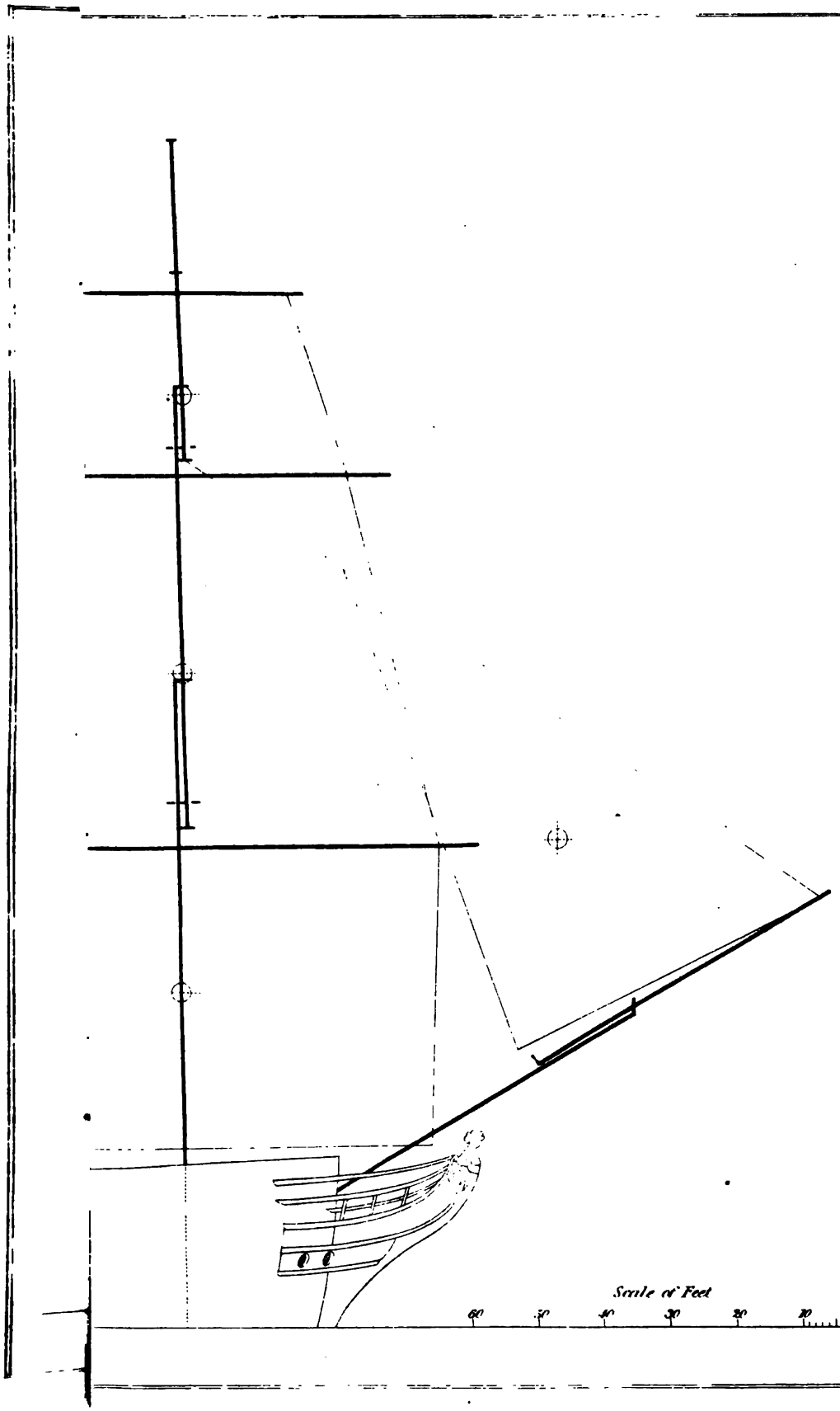
	Feet. In.
The Centre of Effort, without the Gaff-topsail set, the total Area being then 3307 Feet, brings the Centre afore the Middle, and to	2 $9\frac{1}{4}$
Ditto above the Load-water-line	29 $7\frac{1}{8}$
Load Draught of Water . . . . . Forward	7 7
Aft	14 5

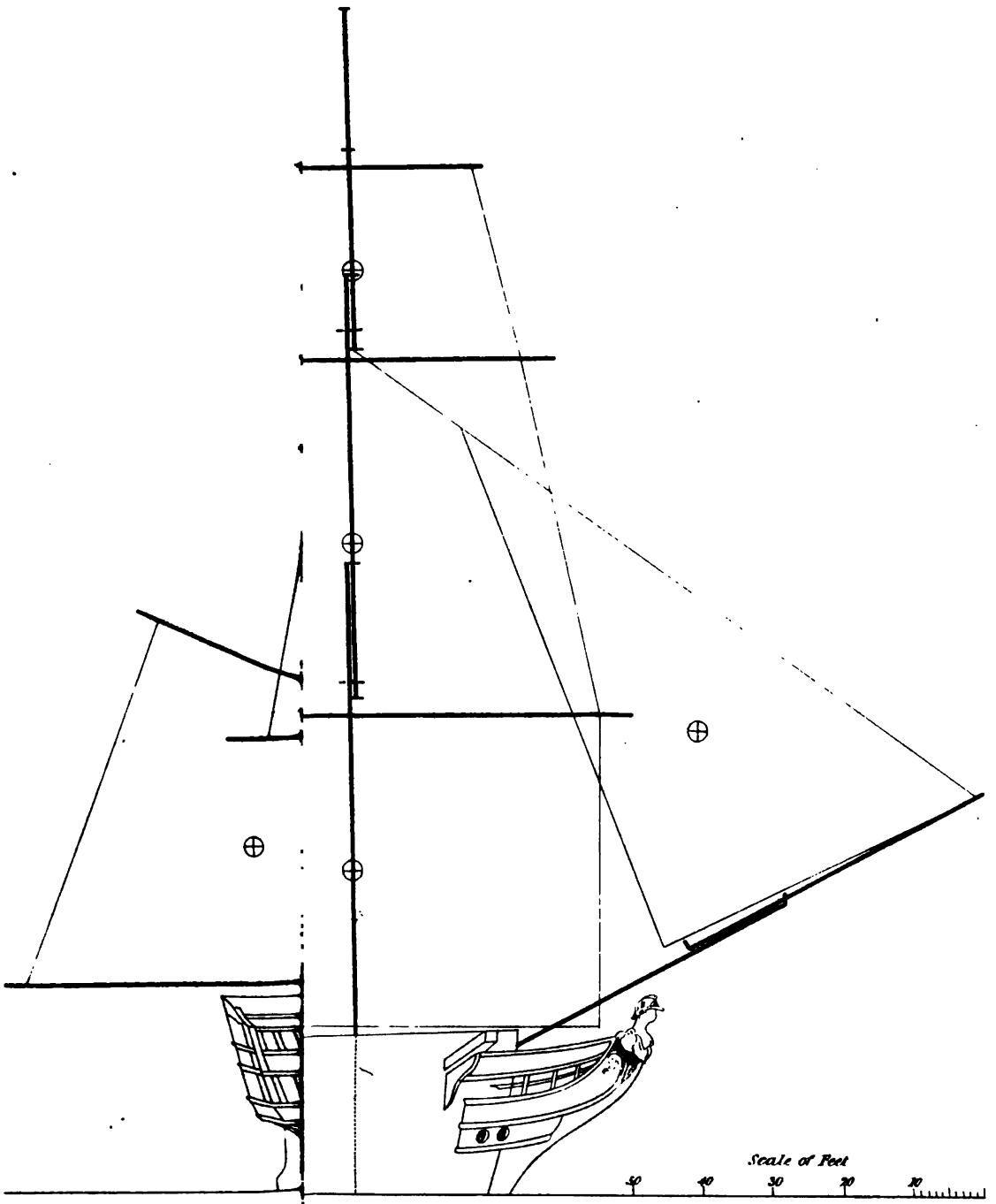
Vide Plate XXVI.

PLATES OF THE SEVERAL CLASSES OF SHIPS AND VESSELS, SHEWING THE CENTRE OF EFFORT OF THEIR SAILS, ETC.



S: Vincent's Clafs. B.


Scale of Feet
60
50
40
30
20
10


Scale of Feet
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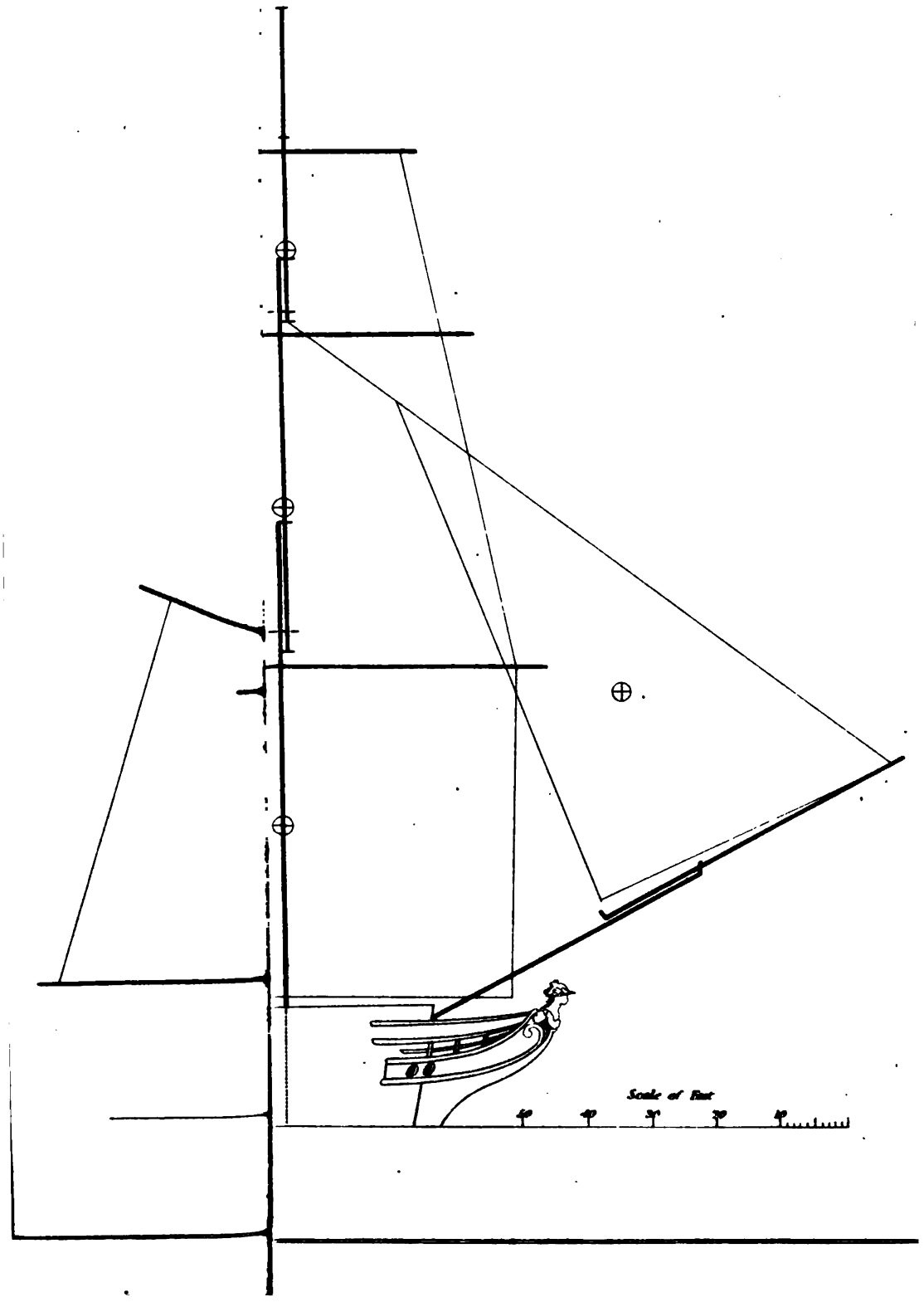
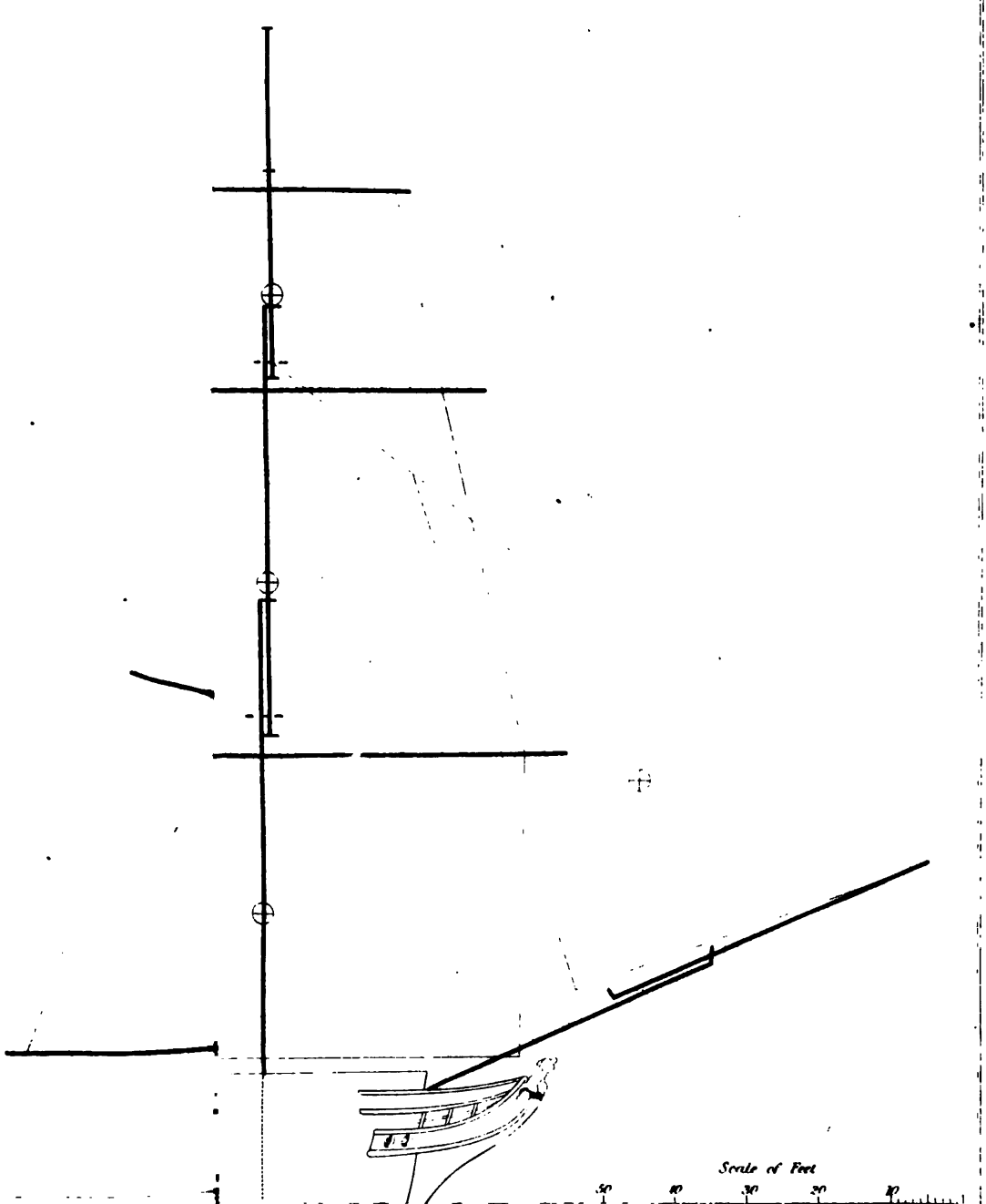

Scale of Feet


Scale of Feet
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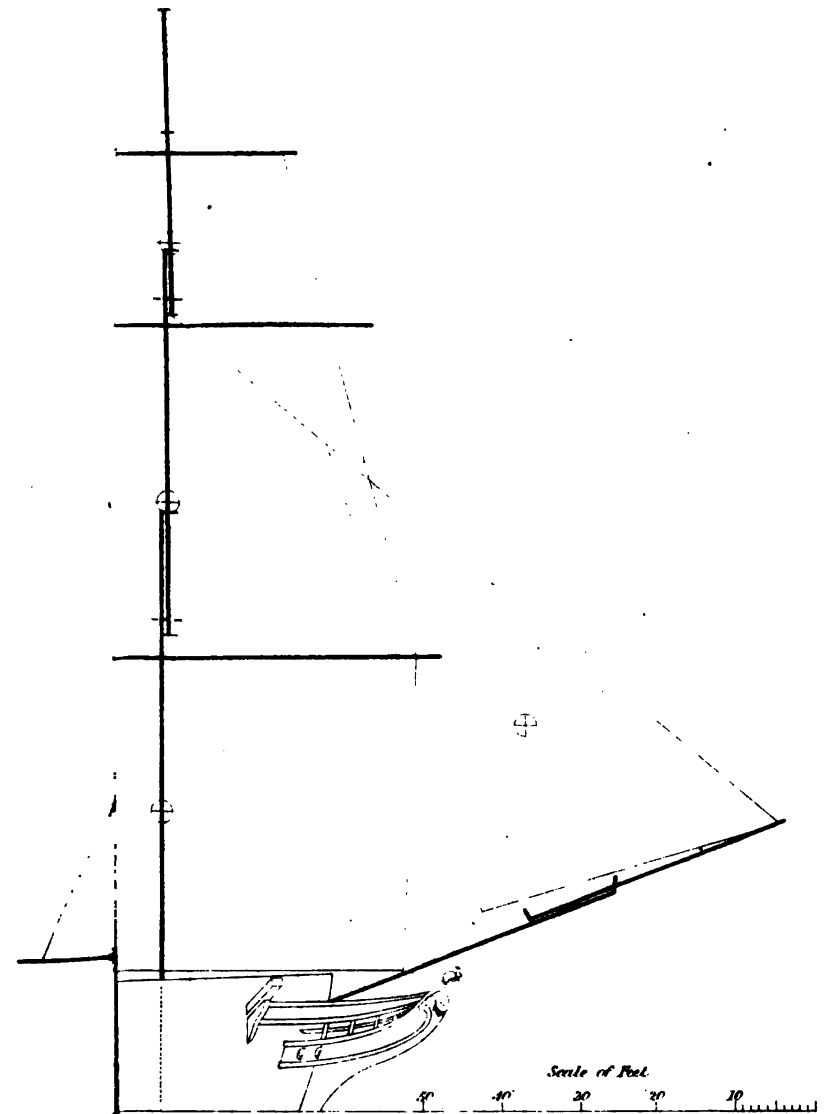
40
30
20
10


Scale of Feet
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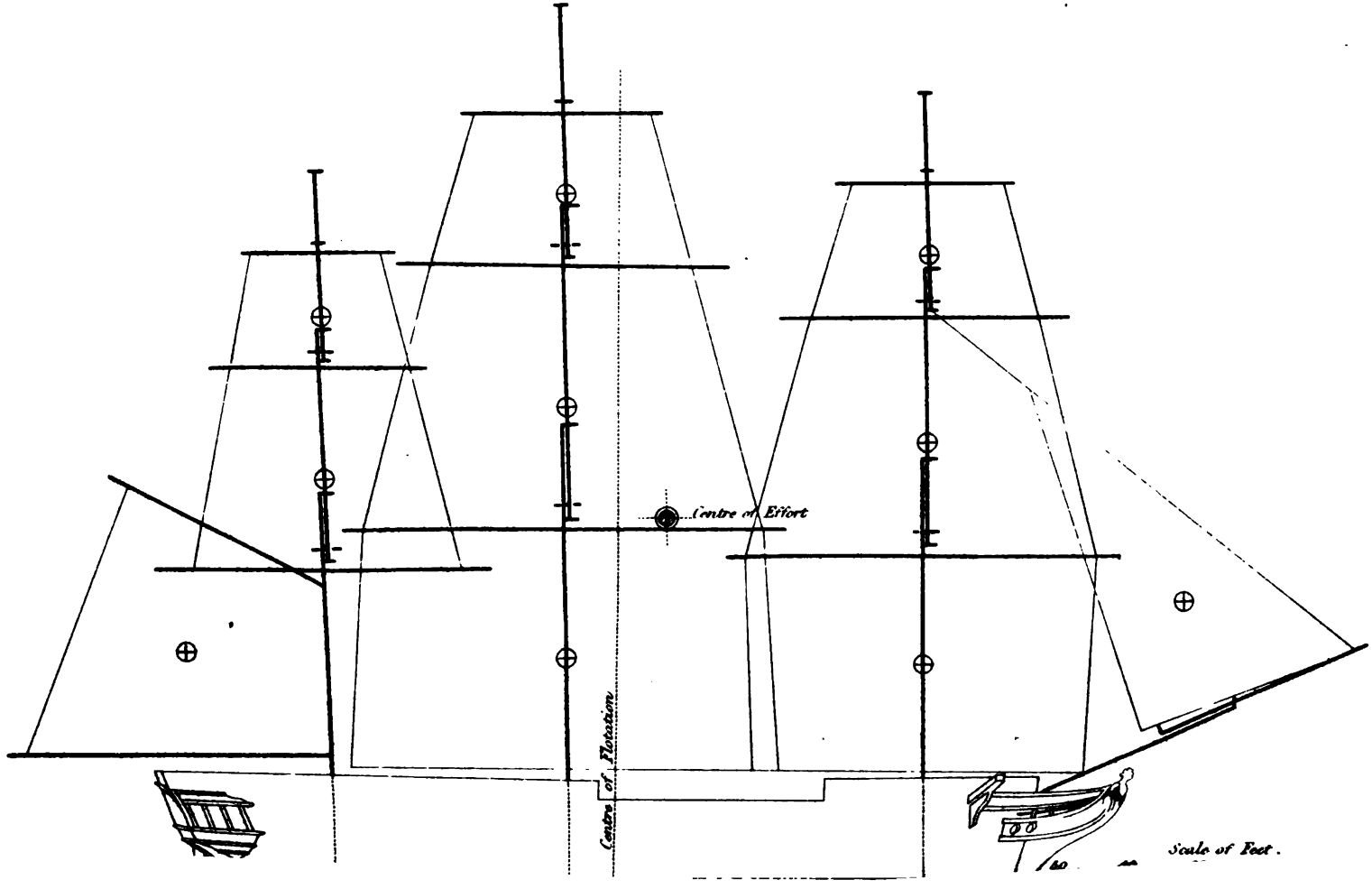
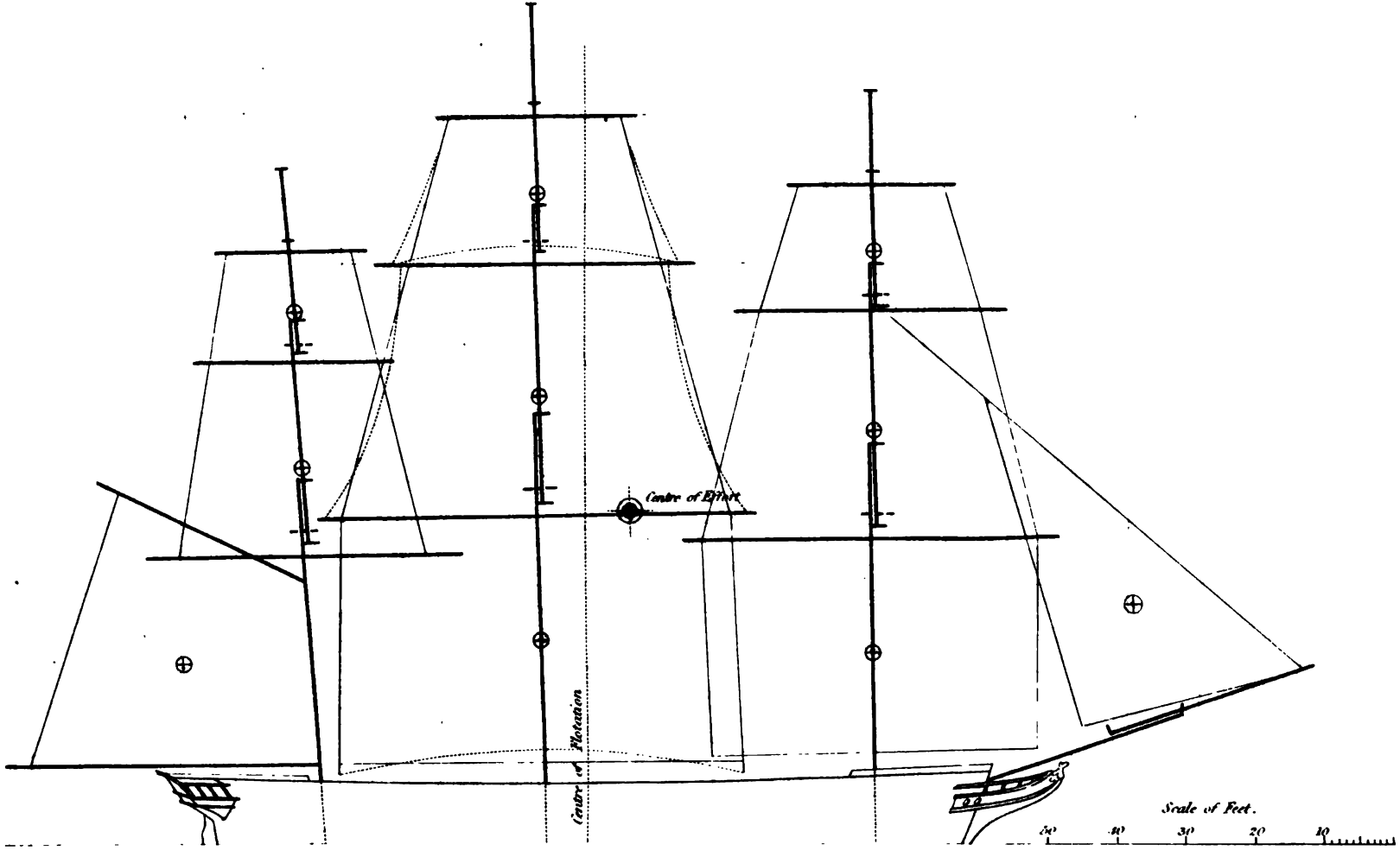
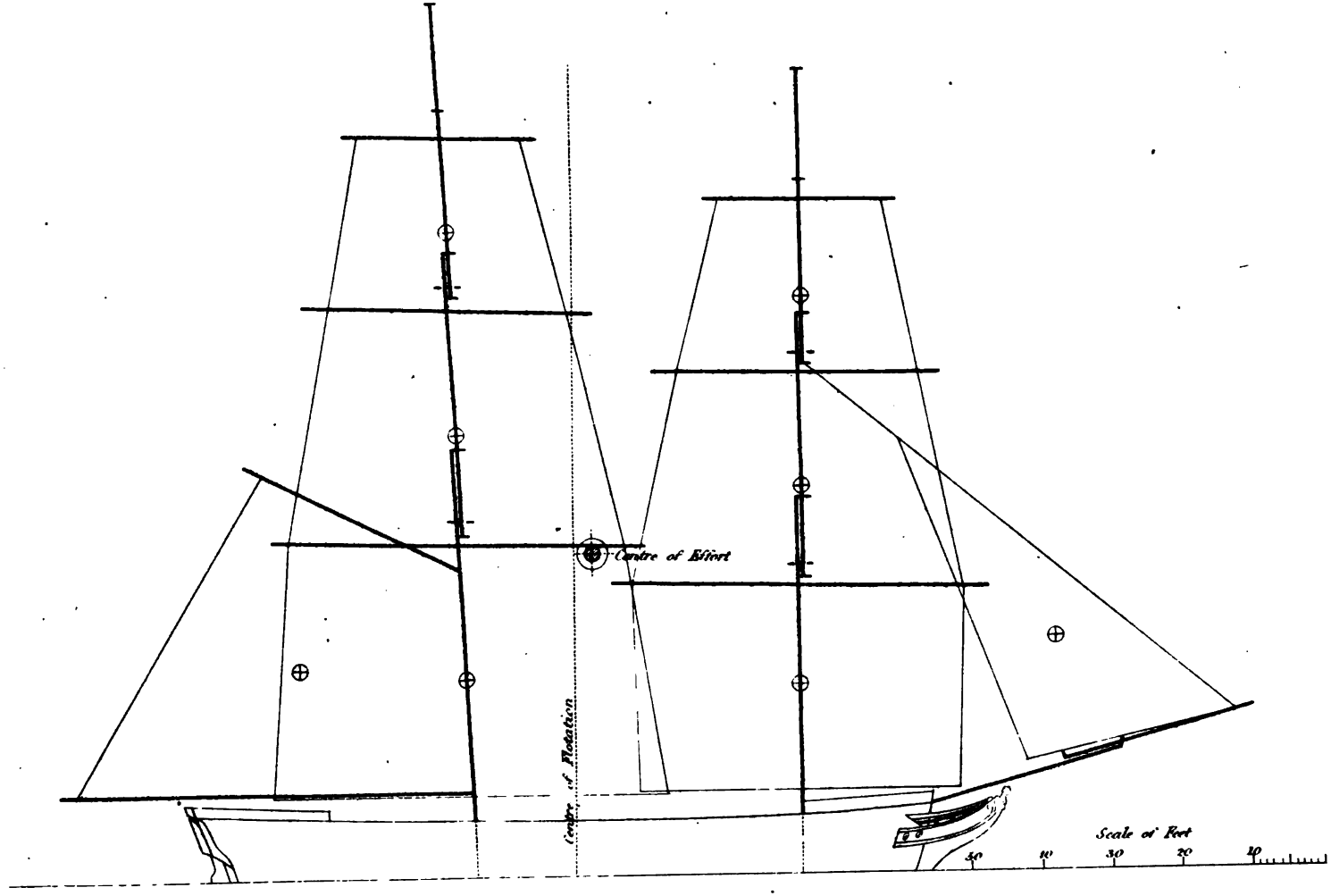
40
30
20
10

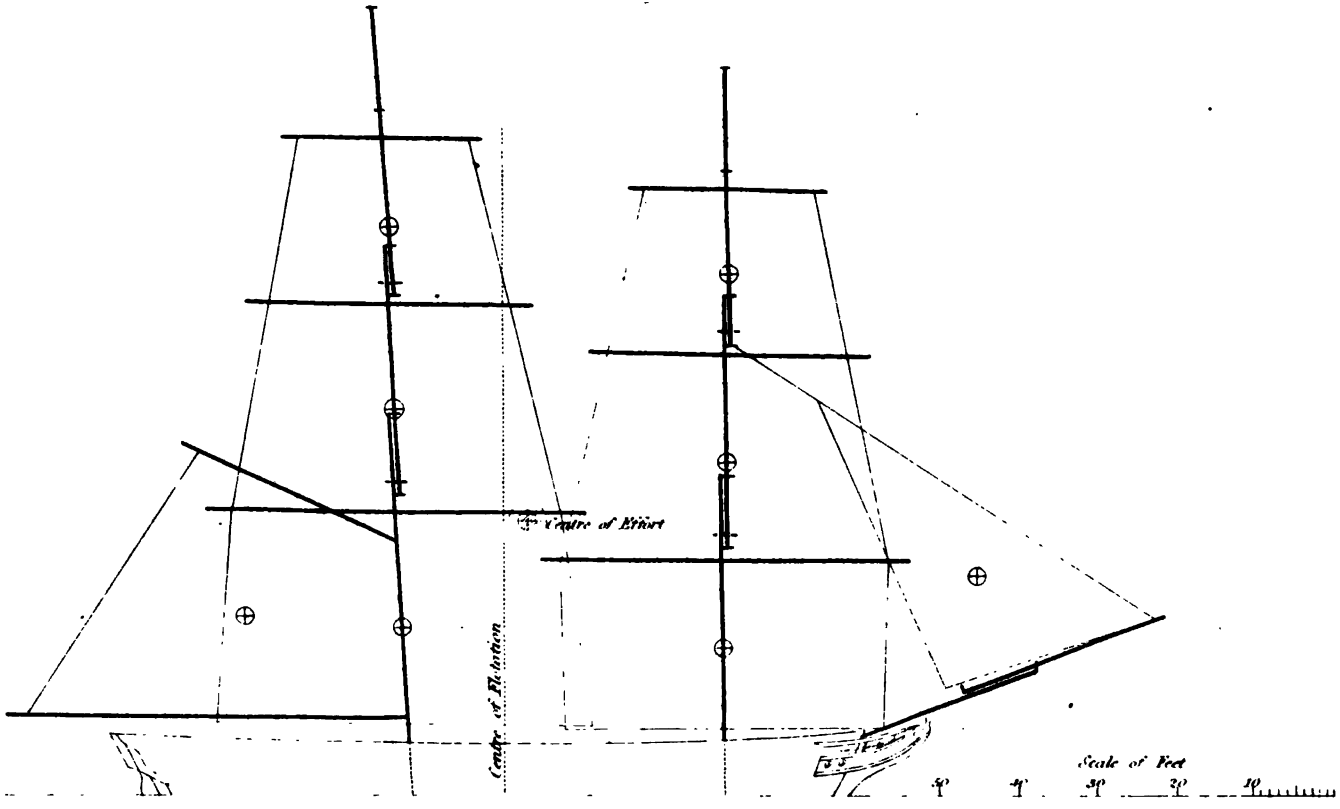

Centre of Effort
Centre of Flotation
Scale of Feet.



THE 18 GUN CORVETTE.

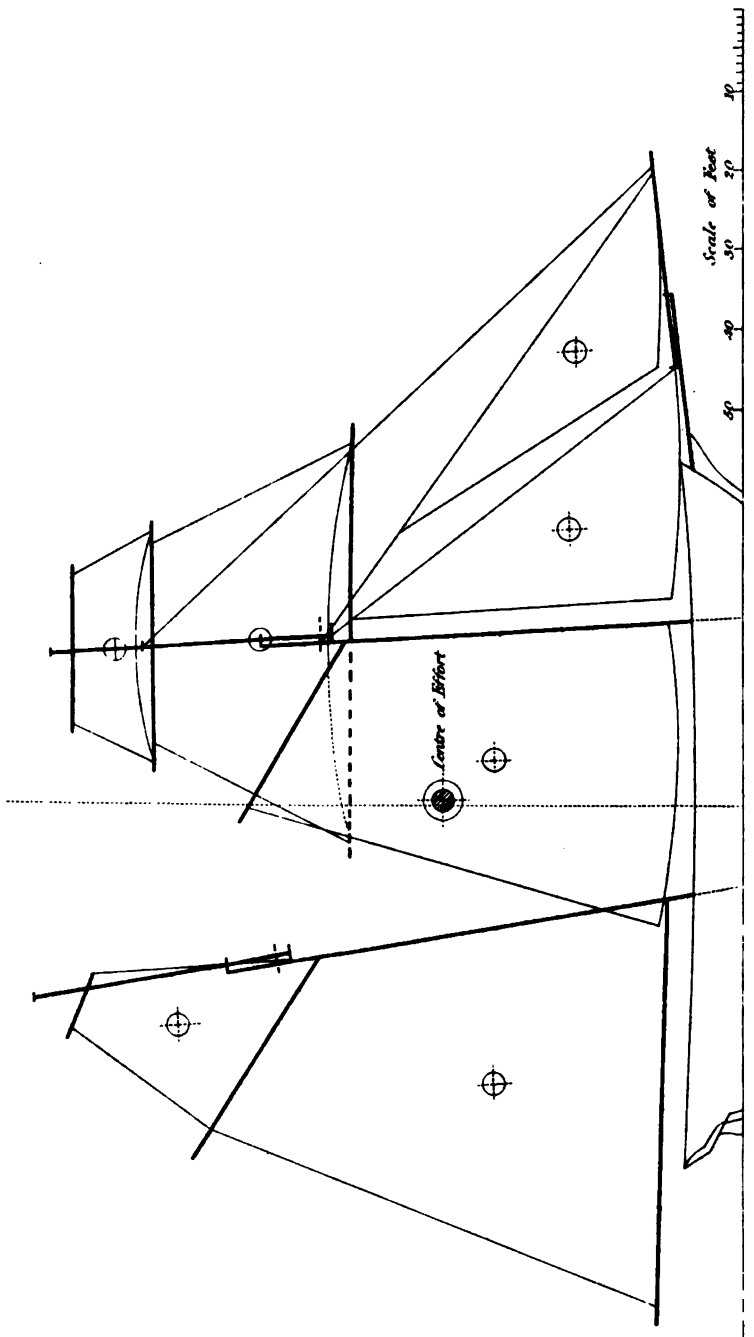


THE 18 GUN - BRIG.

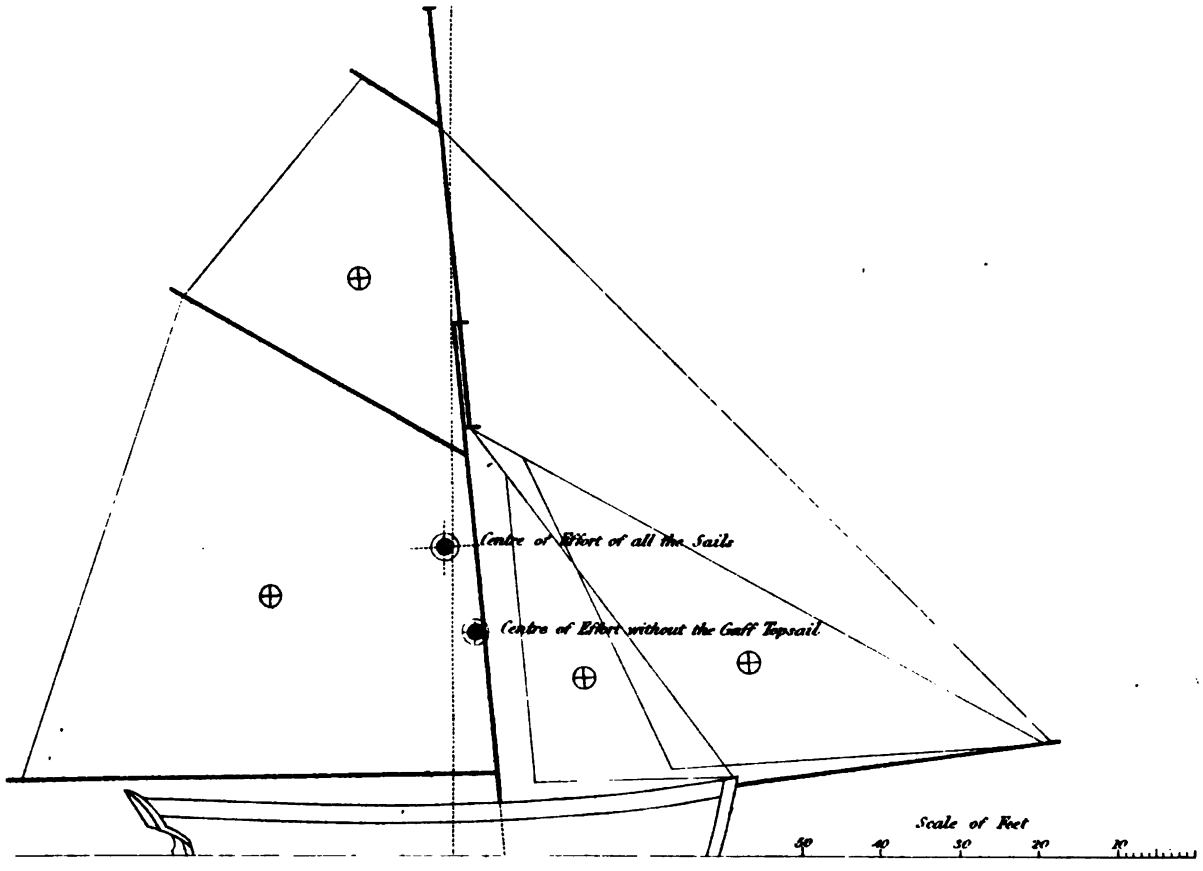


THE 10 GUN-BRIG.

Pl. 24



THE SCHOONER OF 185 TONS.



THE CUTTER OF 161 TONS.

Pl. 2

PARTICULARS OF THE DIMENSIONS AND DISPLACEMENTS, ETC. OF SEVERAL NEW CLASSES OF SHIPS OF WAR.

THE DIMENSIONS PER DRAUGHT, ETC.

Particulars.	Names of the Ships and Vessels.									
	London, 92 Guns.		Castor, 36 Guns.		Vernon, 50 Guns.		Rover, Corvette, 18 Guns.		Snake, Brig, 16 Guns.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Length of Deck	205	6	159	0	176	0	113	0	100	0
„ of Keel for Tonnage	170	4	133	7⅜	144	6¼	90	1	76	9⅓
Breadth for Ditto	53	6	42	6	52	0	35	0	32	0
Extreme Breadth	54	4	43	0	52	8½	35	4	32	4
Depth in Hold	23	2	13	6	17	1	16	9	14	10
Burthen in Tons No.	2598		1283		2082		587		418	
Calculated Light-Water-Line — Forward	15	2	12	8	....		9	5	8	4
Calculated Light-Water-Line — Aft	18	3	15	6	....		12	3	12	0
Ascertained Line, when launched — Forward	...		12	8	13	6	...		8	1
Ascertained Line, when launched — Aft	...		15	2	17	6	...		12	4
Constructed Load-Line — Forward	23	3	19	1	20	9	14	0	13	6
Constructed Load-Line — Aft	24	3	20	1	21	9	15	0	14	9
Height of Ports — Fore	8	2	8	8	10	6	7	0	6	3
Height of Ports — Midship	7	0	7	8	9	0	6	0	5	3
Height of Ports — Aft	8	2	8	6	9	9	6	2	5	4

THE NUMBER AND DESCRIPTION OF GUNS THEY ARE TO CARRY.

DECKS.	NAMES OF THE SHIPS AND VESSELS.				
	London, 92 Guns.	Castor, 36 Guns.	Vernon, 50 Guns.	Rover Corvette, 18 Guns.	Snake Brig, 16 Guns.
Gun-Deck	No. Pdrs. 30 32	No. Pdrs. 22 32	No. Pdrs. 28 32	No. Pdrs. 16 32	No. Pdrs. 14 32
	Guns, 63 Cwt.	Gns. 55 Cwt.	Gns. 56 Cwt.	Carronades, 17½ Cwt.	Carronades, 17½ Cwt.
	2 68	. . . .	. . . .	2 9	2 9
	Carrds. 50 Cwt.	. . . .	. . . .	Guns, 24½ Cwt.	Guns, 24½ Cwt.
Upper Deck	No. Pdrs. 34 32	. . . .	. . . .	. . . .	. . . .
	Guns, 54 Cwt.				
Quarter-Deck	No. Pdrs. 18 32	No. Pdrs. 10 32	No. Pdrs. 14 32	. . . .	. . . .
	Guns, 49 Cwt.	Gun-Carrds.* 25 Cwt.	Guns, 48 Cwt.		
Forecastle	No. Pdrs. 8 32	No. Pdrs. 4 32	No. Pdrs. 8 32	. . . .	. . . .
	Guns, 49 Cwt.	Gun-Carrds.* 25 Cwt.	Guns, 48 Cwt.		

* Dixon's Gun-Carronades.

THE DIMENSIONS OF THEIR MASTS AND YARDS.

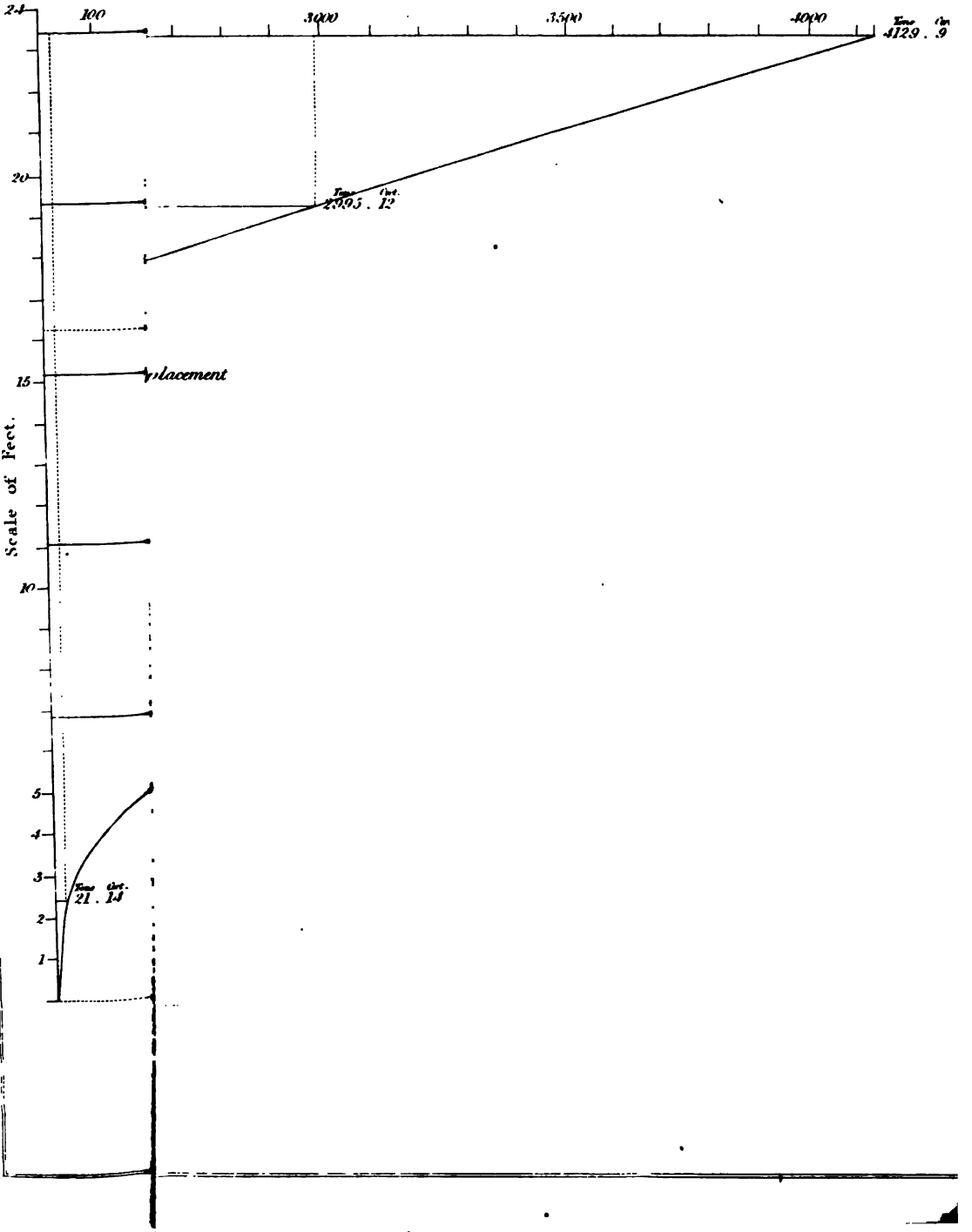
MASTS AND YARDS.		NAMES OF THE SHIPS AND VESSELS.									
		London.		Castor.		Vernon.		Rover.		Snake.	
		Length.	Diameter.	Length.	Diameter.	Length.	Diameter.	Length.	Diameter.	Length.	Diameter.
		Yds. In.	In.	Yds. In.	In.	Yds. In.	In.	Yds. In.	In.	Yds. In.	In.
Lower	Fore-mast	36 28	36 3/4	29 13	27 1/4	35 7	36	22 8	21	22 8	21
	Main-mast	39 32	40	32 0	30 1/4	38 24	38	24 4 1/2	23	24 9	23
	Mizen-mast	27 8	24 1/2	23 2	20	27 9	24	19 20	17	. .	.
	Bowsprit	25 1	36 7/8	19 19	28	22 0	34 1/8	14 31	21	14 12	23
Fore	Topmast	20 34	20 5/8	17 0	17 3/4	19 23	21	13 0	12 3/4	14 6	13
	Top-gallant-mast	10 12	10 2/4	9 6	9 1/4	8 15	11	6 12	6 1/2	7 12	7 1/2
	Lower-yard	30 13	21 1/2	25 6	17 1/2	28 4	21 3/4	17 30	15	18 6	12 1/2
	Topsail-yard	21 18	13 2/4	19 9	12	21 12	13 1/2	14 15	9	14 18	9
	Top-gallant-yard	14 8	8 5/8	12 12	7 3/4	13 12	8 1/2	9 21	6	10 0	7
Main	Topmast	22 34	20 5/8	19 6	17 3/4	22 1 1/2	21	14 27	14 1/2	14 6	13
	Top-gallant-mast	11 17	11 5/8	10 9	10 1/4	9 24	11 1/2	7 6	7 3/4	7 12	7 1/2
	Lower-yard	34 28	24 5/8	28 26	19 7/8	32 8	22 5/8	20 24	16 1/2	18 6	12 1/2
	Topsail-yard	24 20	15 1/2	21 20	13 2/8	24 24	15	16 18	11	14 18	9
	Top-gallant-yard	16 9	10	14 20	8 1/4	15 10	9	10 18	6 1/2	10 0	7
Mizen	Topmast	16 17	13 3/4	14 13	11 3/4	16 10	13 1/4	11 3	10	. .	.
	Top-gallant-mast	8 8	8 5/8	7 24	7 5/8	7 6	8 1/2	7 6	5 1/2	. .	.
	Cross-jack-yard	24 20	15 1/2	21 20	13 3/4	23 18	15	16 18	11	. .	.
	Topsail-yard	16 12	10 1/8	14 20	8 3/4	15 13	9 5/8	11 18	6	. .	.
	Top-gallant-yard	12 3	6 1/2	9 8	5 1/2	17 21	6 5/8	7 33	4 1/2	. .	.
	Driver-boom	23 7	13 3/4	19 19	11 5/8	19 12	12 3/4	12 24	10	19 0	13 1/2
	Driver-gaff	17 6	12 5/8	15 3	10 1/8	16 19 1/2	10	9 0	7 3/4	12 12	10
	Jib-boom	17 18	15 1/4	15 0	12 7/8	16 0	15 1/2	11 0	10	10 0	9 1/2
	Spritsail-yard	21 18	13 3/4	19 9	12	21 12	13 1/2	14 15	11	14 18	9

THE DISPLACEMENT, ETC. OF THE LONDON, FIRST-RATE.

THE LONDON'S CALCULATED DISPLACEMENT, ETC. PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	20	4
Ditto Ditto Load Line	23	9¾
Ditto of One Foot of the Midship Section, at the Light Line .	16	0
Ditto Ditto Load Line .	27	2
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation . .	3	5
Ditto above the lower Side of the Keel .	15	5⅜
Ditto below the Load-Water-Line . .	8	3⅝
	Feet.	
Area in Feet, of the Light-Water-Line	8484	
Ditto Load-Water-Line	9866	
Displacement in Feet, at the Load Line	144532	
	Tons.	**Cwt.**
Ditto in Tons, at the calculated Light Line	2212	0
Ditto constructed Load Line	4129	9

First Rate.


24
100
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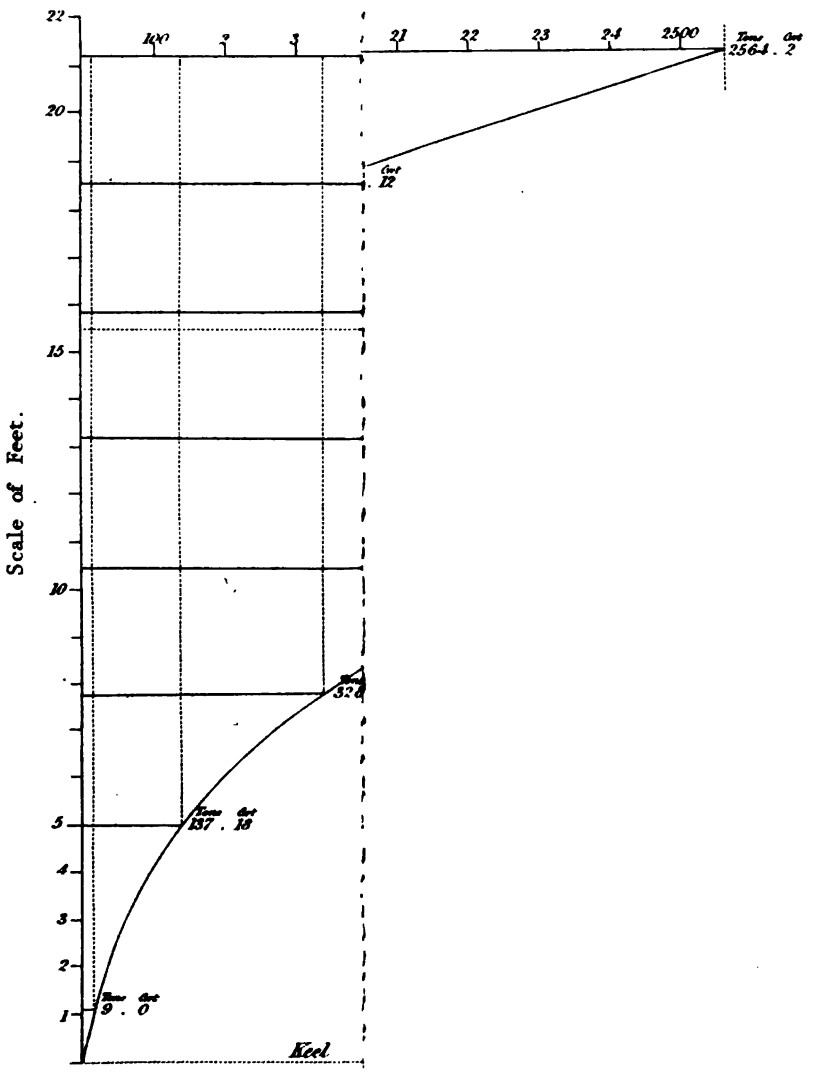
THE DISPLACEMENT, ETC. OF THE CASTOR FRIGATE OF 36 GUNS.

THE CASTOR'S CALCULATED DISPLACEMENT, ETC. PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	11	12
Ditto Ditto Load Line	14	$7\frac{1}{4}$
Ditto of One Foot of the Midship Section, at the Light Line .	9	$14\frac{3}{4}$
Ditto Ditto Load Line .	12	12
	Feet.	**In.**
Centre of Gravity of Displacement afore the Centre of Flotation . .	3	$7\frac{7}{8}$
Ditto above the lower Side of the Keel .	13	$5\frac{1}{8}$
Ditto below the Load-Water-Line . .	6	$1\frac{7}{8}$
	Feet.	
Area in Feet, of the Light-Water-Line	4840	
Ditto Load-Water-Line	6036	
Displacement in Feet, at the Load Line	63861	
	Tons.	**Cwt.**
Ditto in Tons, at the calculated Light Line	943	12
Ditto constructed Load Line	1824	12


22
20
15
10
5
4
3
2
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Scale of Feet.
100
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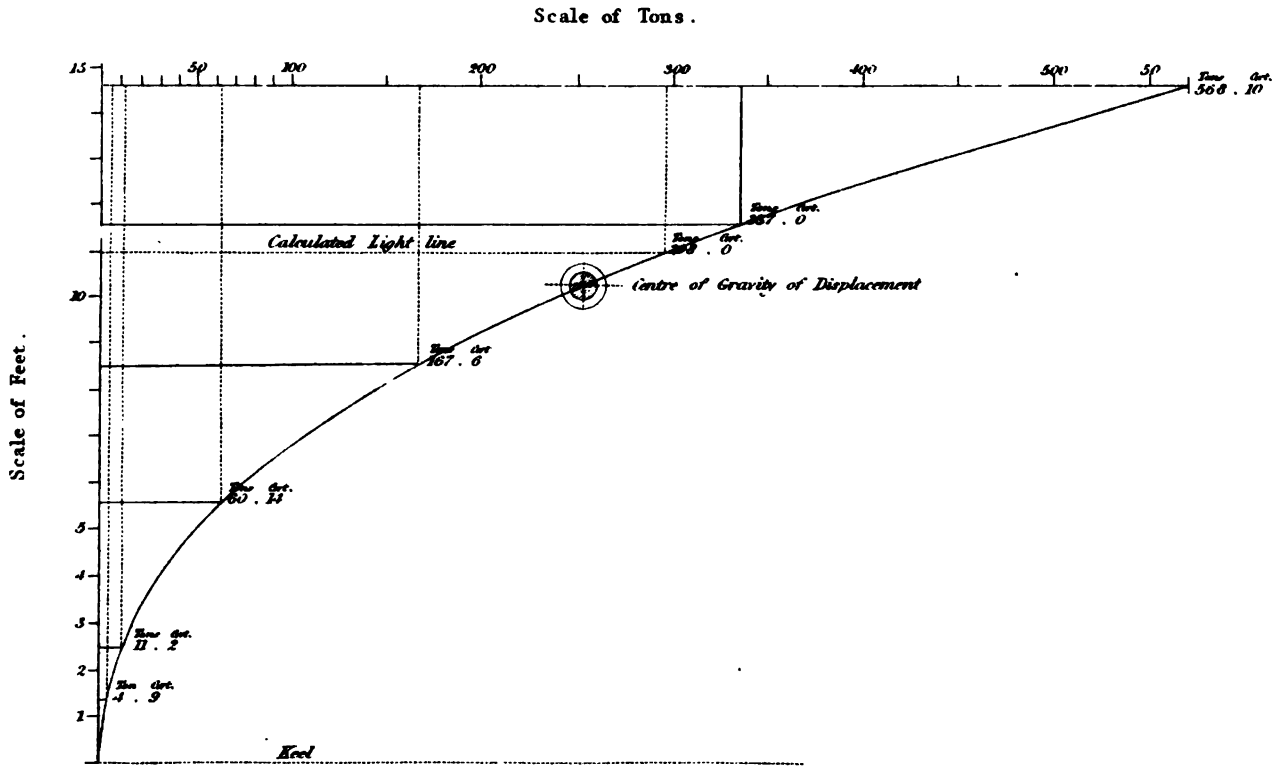
3
21
22
23
24
2500
Tons Cwt
256 . 2
Cwt
12
Tons Cwt
32 .
Tons Cwt
137 . 18
Tons Cwt
9 . 0
Keel

THE DISPLACEMENT, ETC. OF THE ROVER CORVETTE OF 18 GUNS.

THE ROVER'S CALCULATED DISPLACEMENT, ETC. PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	5	4
Ditto Ditto Load Line	7	5
Ditto of One Foot of the Midship Section, at the Light Line	4	2
Ditto Ditto Load Line	7	2
	Feet.	**In.**
Centre of Gravity of Displacement, afore the Centre of Flotation	3	3½
Ditto above the lower Side of the Keel	10	2
Ditto below the Load-Water-Line	4	4
	Feet.	
Area in Feet, of the Light-Water-Line	2187	
Ditto Load-Water-Line	3034	
Displacement in Feet, at the Load Line	19899	
	Tons.	**Cwt.**
Ditto in Tons, at the calculated Light Line	298	0
Ditto constructed Load Line	568	10

Scale of Capacity for the Rover Corvette: New Class.



Pl. 30.

THE DISPLACEMENT, ETC. OF THE SNAKE BRIG OF 16 GUNS.

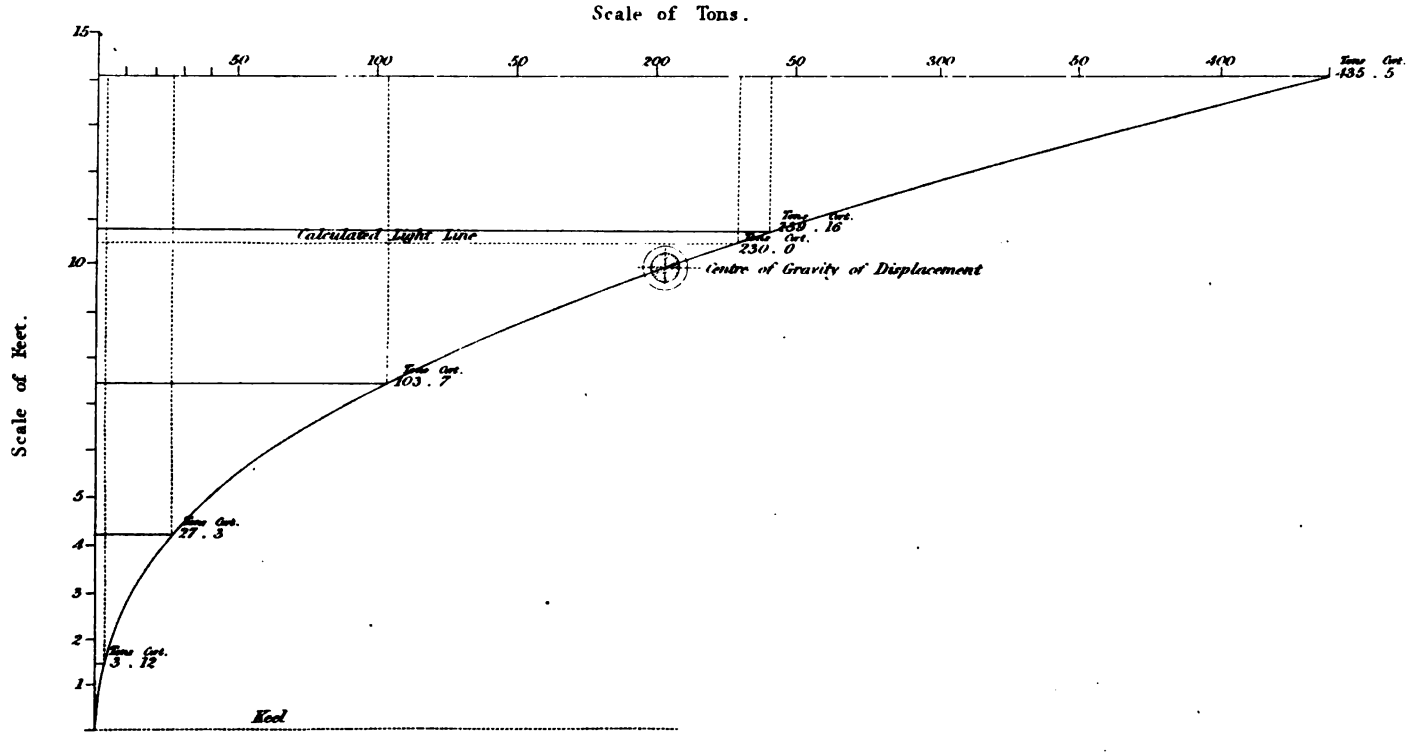
THE SNAKE'S CALCULATED DISPLACEMENT, ETC. PER DRAUGHT.

	Tons.	Cwt.
The Displacement of One Inch at the Light Line	4	8
Ditto Ditto Load Line	5	14¼
Ditto of One Foot of the Midship Section, at the Light Line	4	0
Ditto Ditto Load Line	6	12½
	Feet.	**In.**
Centre of Gravity of Displacement, afore the Centre of Flotation	3	1¾
Ditto above the lower Side of the Keel	9	10¾
Ditto below the Load-Water-Line	4	2¾
	Feet.	
Area in Feet, at the Light-Water-Line	1760	
Ditto Load-Water-Line	2401	
Displacement in Feet, at the Load Line	15234	
	Tons.	**Cwt.**
Ditto in Tons, at the calculated Light Line	230	0
Ditto constructed Load Line	435	5

THE COMPARATIVE MEASURE OF THE ENGLISH FOOT OF TWELVE INCHES, WITH THE FOOT MEASURE OF VARIOUS FOREIGN NATIONS.

	Inches.
The Foot of Paris is	$12\frac{8}{10}$.
„ Amsterdam	$11\frac{3}{10}$.
„ Antwerp	$11\frac{3}{10}$.
„ Leyden	$12\frac{3}{10}$.
„ Strasburgh	11.
„ Frankfort	$11\frac{6}{10}$.
„ Spain	12.
„ Venice	$13\frac{9}{10}$.
„ Dantzic	$11\frac{3}{10}$.
„ Copenhagen	$11\frac{6}{10}$.
„ Rome	$11\frac{6}{10}$.
„ Greece	$12\frac{1}{10}$.
„ United States of America	12.
„ China	$12\frac{2}{10}$.

Scale of Capacity for the Snake Brig: New Class.



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Calculations relating to the equipm
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